

Cancer & Tumor Markers

Reagents for Assay Development

ISO Certified 13485:2016



www.MeridianLifeScience.com

Company Overview





Extensive Capabilities & Services

Molecular Reagents

qPCR | RT-qPCR | LAMP

ENZYMES

- Hot-Start Taq technologies chemical, antibody, aptamer
- Lyo & Air-Dryable enzymes (glycerol free) Taq, Bst, RTase
- Thermostable MMLV RT

MASTER MIXES

- Lyo & Air-Dryable formats
- Inhibitor-tolerant mixes for stool, sputum, saliva, blood, plant, water.
- For multiplexing, GC-rich templates

NUCLEOTIDES

- dNTPs, Na or Li salts
- Ultra high purity, >99%

Immuno Reagents

Antigens | Antibodies | Blockers

VIRUS MANUFACTURING

- Live or inactivated
- Proprietary Ag purification

RECOMBINANT PROTEINS

- *E. coli, P. pastoris, S. cerevisiae*, Sf9, Mammalian (CHO, HEK293)
- 10L-130L fermentation

ANTIBODIES - MAbs/PAbs

- 500+ MAbs produced in grams
- Multi-Kilograms of MIgG / year
- Hundreds of liters of GxhlgG
- Ascites production (55,000 Mice)

Commercial scale manufacturing of antigens and antibodies with protein purification expertise.

Meridian has been providing innovative life science solutions and building trusted partnerships for over 43 years. Meridian's focus is to offer complete solutions for the development of molecular and immunological assays.

- Full line of immunoassay reagents, including antigens, antibodies and blockers
- Large scale production of reagents for molecular assays
- Technical support with assay development experience
- Dedicated R&D and manufacturing teams
- Robust and mature Quality System



Global presence



Company Overview

Antigens & Antibodies

INFECTIOUS DISEASE EXPERTISE

Tropical

- Zika
- Dengue 1, 2, 3, 4
- Chikungunya
- Malaria
- Chagas
- Leishmaniasis
- Leptospirosis
- Newcastle Disease
- Yellow Fever
- Nipah Virus
- JEV

ToRCH & Childhood

- Toxo
- Rubella
- CMV
- HSV-1,2 Rubeola
- EBV
- Mumps
- Coxsackie
- Rotavirus
- RSV
- Parvo B19
- VZV

- **Viral Hepatitis**
- HAV

F

- HBV
- HCV
- HDV
- HEV

Q

STD

- HSV-1, 2
- HIV-1, 2
- HPV
- Syphilis
- Chlamydia
- Neisseria





Gastro

- H. Pylori
- C. Difficile
- Norovirus
- Adenovirus
- Rotavirus
- Cryptosporidium
- Campylobacter
- E. Coli
- Salmonella
- G. Lambia
- Astrovirus

75

Respiratory

- SARS-CoV-2
- M. Pneumoniae
- C. Pneumoniae
- Influenza A, B
- Parainfluenza L. Pneumophilia
- RSV
- M. Tuberculosis
- Streptococcus
- Staphylococcus
- Adenovirus

V

Cardiac

- Troponin I, T
- Myoglobin
- BNP
- NT-proBNP
- CRP
- PCT
- CK-MB
- D-Dimer
- Cystatin-C
- Galectin-3
- Vitamin D
- Apo A, B, E
- NSE
- FABP
- SAH
- MPO
- Fibrinogen
- EGF
- Lp-PLA2
- PAPP-A

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Hormones

- LH, FSH, hCG,
- hGH, AMH
- Cortisol
- Estradiol
- Insulin, C-peptide
- Prolactin
- Progesterone

Thyroglobulin

- PTH
- PAPP-A
- TSH, T3, T4, ACTH

Allergens

- Cat & Dog Allergen
- Horse Allergen
- Dust Mite
- Alternaria alternate
- Timothy Grass
- Platanus acerifolia
- Mugwort

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Cancer

- CA125
- CA15-3
- CA19-9
- CA72-4
- CA50
- CA242
- Cyfra 21-1
- CEA
- Thyroglobulin
- erbB-2/HER2
- AFP
- EGFR
- HE4
- NSE
- PMA
- PAP
- PSA
- PSMA
- S-100
- PIVKA II
- B2M

Y

Autoimmune

- Jo-1
- PCNApANC
- pANCAcANCA
- Sm Aq
- dsDNA
- La(SSA)
- Ro(SSA)
- Histone
- GMB
- C1q
- Scl-70
- SS-A
- BS-Gly-1
- Cathepsin G
- Calprotectin

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Veterinary

- ASFV
- Avian Influenza
- Borrelia
- Brucella abortus
- Canine Distemper

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PCP

THC

Blockers

TRU Block[™] &

IgM Diluent

Rabbit, Sheep

Human IgA, IgG,

Kappa Light chain

Lambda Light chain

Goat Anti-Human

Goat Anti-Mouse IgG

www.MeridianLifeScience.com

IgG, IgM, IgA

IgM, IgE

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Drug of Abuse

Amphetamine

Benzodiazepine

Buprenorphine

Barbital

Cocaine

Cotinine

EDDP

Fentanyl

• K2

Ketamine

Methadone

Morphine

Norketamine

Oxycodone

Phenobarbital

Propoxyphene

Immunoglobulins/

Animal IgGs – Bovine,

Chicken, Goat, Mouse,

Opium

MDMA (Ecstasy)

Methamphetamine

- Feline
- Immunodeficiency
- Feline Leukemia
- Foot-and-Mouth
- Canine Heartworm
- Infectious Bursal Disease
- Marek Disease
- Newcastle Disease
- Canine Parvovirus

Serum Amyloid A (SAA)

Trichomonas foetus

Microbial Detection

Cryptosporidium

Rabies Virus

Transmissible

Legionella

Salmonella

G. Lambia

B. Anthracis

Clostridium

Streptococcus

Staphylococcus

C. Jejuni

E. Coli

Listeria

Gastroenteritis

Nipah

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Respiratory Infections & Diagnosis

Cancer is a leading cause of death worldwide. More than half of all cancer deaths each year are due to lung, stomach, liver, colorectal and female breast cancers. If recent trends in major cancers continue globally in the future, the burden of cancer will increase by 68% over the next 15 years. The high cancer mortality rates are primarily due to a delayed detection of the disease and differences in the policies on cancer screening between countries.

Early detection is the key focus of cancer diagnostics and an early diagnosis makes it possible to cure the disease completely and/or increase survival rates. However, the financial burden associated with the cost of managing and treating cancer is a growing concern. Non-invasive techniques such as serum immunoassays detecting specific tumor markers are highly sought after in order to minimize the costs associated with screening and monitoring the disease. They provide fast, cost-effective, and accurate cancer detection while providing a valuable aid to the clinician and increased comfort to the patient.

Cancer biomarkers (also called tumor markers) are proteins produced either by the tumor itself or by the body in response to the presence of cancer. They can be broadly classified into four groups: (1) screening and early detection, (2) diagnostic confirmation, (3) prognosis and prediction of therapeutic response, and (4) monitoring disease and recurrence.

Over the past decade, an improved understanding of carcinogenesis and tumor progression has revealed a large number of potential tumor markers. Some markers are associated with only one type of cancer, whereas others are associated with two or more cancer types. No "universal" tumor marker that can detect any type of cancer has been discovered.



Product Quickfind List

Α

Alpha 1 Antitrypsin (A1AT)
Alpha 2 Macroglobulin (A2M)
Alpha Fetoprotein (AFP)
Amylase
Apolipoprotein CI (Apo CI)
Apolipoprotein E (Apo E)
B
Beta 2 Microglobulin (B2M)
С
Cadherin-E
Calcitonin
Calprotectin L1
CA125
CA15-3/MUC1)
CA19-9
CA50
CA72-4 (TAG-72)
CA242
CEA
Catalase
CD1d
CD3
CD8
CD13 (Aminopeptidase N)1
CD151
CD24
CD28
CD301
CD37
CD42 1
CD49d
CD57 1
CD591
CD66b1
CD90 1
CD105 (Endoalin) 1
CD147 1
CD177
CD195 (CCR5) 1
Centromere Protein B (CENPB) 1
c-Myc1
Collagen Type VI
Cvfra 21-1

D
Defensin-beta13
Desmin14
Disialoganglioside GD214
E
Elastase14
EGFR 14
erbB-2, HER2/neu15
EpCAM15
<u>F</u>
Factor H (Beta 1H) 15
Factor VIII (FVIII)15
G
GAPDH15
Н
Heat Shock Proteins
Hemoglobin16
HE416
<u>I</u>
IGF-I16
IGFBP-317
Integrin alpha M (CD11b/MAC-1)17
Interferon gamma (IFN-gamma)17
IL-1a and IL-1R17
L
Lactate Dehydrogenase (LDH)17
Lamin
Leptin
Lysozyme18
<u>M</u>
Microtubule Associated Protein 2
(IVIAP-2)
Nast Cell Tryptase (IVICT)

Ν

NGAL/Lipocalin-2	19
NSE	19
0	
Osteopontin (OPN)	19
Р	
Pepsinogen I and Pepsinogen II	20
PIVKA-II	20
Prolactin (PRL)	20
Prostate Secretory Protein (PSP)	20
PSA	20
R	
Retinol Binding Protein 4 (RBP4)	
S	
S-100	22
Serum Amyloid A (SAA)	22
Sialyl Lewis A and Sialyl Lewis X	22
Superoxide Dismutase (SOD)	23
т	
Thymus and Activation Regulated	
Chemokine (TARC)	23
Thyroid Peroxidase (TPO)	23
Thyroglobulin (Tg)	23
Tissue Transglutaminase (tTG)	23
Trypsin	
TNF-alpha	
U	
Urokinase (uPA)	
V	
Vitropoctin	



Leading Products

Antibodies & Matched Pairs

Alpha Fetoprotein (AFP)

M86304M	MAb (Capture), ELISA	
M86641M	MAb (Detection), ELISA	ł
* Not cross reacti	ve with human albumin.	

MAM01-210 MAb (Capture), ELISA MAM01-301 MAb (Detection), ELISA

Beta 2 Microglobulin (B2M)

MCP17-301 MAb, ELISA & RIA

* Reacts with soluble B2M and B2M associated with cell-surface MHC Class I molecules and other membrane antigens.

CA125

M86306M	MAb Group A <i>(Capture),</i> ELISA & WB
M86924M	MAb Group B <i>(Detection),</i> ELISA & WB
M86306M	MAb Group A <i>(Capture)</i> , ELISA & WB
M86429M	MAb Group B <i>(Detection)</i> , ELISA & WB
* Both pairs dete	ect OC125 (Group A) and M11 (Group B).
CA19-9	
M66107M	MAb <i>(Capture),</i> ELISA
M66106M	MAb <i>(Detection),</i> ELISA
M66108M	MAb <i>(Alternate Detection),</i> ELISA
M66106M	MAb (Capture/Detection), ELISA
M66108M	MAb (Capture/Detection), ELISA
* Abs can be us	ed as capture or detection in a sandwich assay.
0470 4	

CA72-4

M01341M	MAb <i>(Capture)</i> , ELISA
M01342M	MAb (Alternate Capture), ELISA
M01340M	MAb (Detection), ELISA

CEA

MAM02-008 MAb (*Capture/Detection*), ELISA MAM02-009 MAb (*Capture/Detection*), ELISA * Abs can be used as capture or detection in a sandwich assay.

MAM02-009 MAb (Capture), ELISA MAM02-881 MAb (Detection), ELISA

M01250MMAb (Capture), ELISA & IHCM01246MMAb (Detection), ELISA & IHC* Specific for CEA epitope specificity group I.

Cyfra 21-1 (Cytokeratin 19)

M01300M	MAb,	ELISA	& WB
M01326M	MAb,	ELISA	

Epidermal Growth Factor Receptor 2 (ERB2, HER2/NEU)

M01296M	MAb, ELISA, reacts with peptide ILDV4 (dephosphorylated)
M01297M	MAb, ELISA, reacts with peptide ILDV4 (phosphorylated)
M01298M	MAb, ELISA, reacts with peptide ILDV2
M01299M	MAb, ELISA, reacts with peptide ILDV2 (phosphorylated)
HE4	
M01323M	MAb <i>(Capture)</i> , ELISA
M01320M	MAb <i>(Detection)</i> , ELISA
M01323M	MAb <i>(Capture),</i> ELISA
M01321M	MAb <i>(Detection),</i> ELISA
Human Her	noglobin (Fecal Occult Blood)
H01348M	MAb <i>(Capture),</i> ELISA
H01349M	MAb <i>(Detection),</i> ELISA
H01416M	MAb <i>(Capture),</i> ELISA
H01369M	MAb <i>(Detection),</i> ELISA
H01409M	MAb <i>(Capture),</i> LF & Turbidimetry
H01410M	MAb <i>(Detection),</i> LF & Turbidimetry
Neuron Spo	ecific Enolase (NSE)
M86101M	MAb (<i>Capture/Detection</i>), ELISA
M86520M	MAb (<i>Capture/Detection</i>), ELISA
* Abs.can.be.use	d as capture or detection in a sandwich assay
Pepsinoger	1 I
K01402M	MAb <i>(Capture)</i> , ELISA & LF
K01403M	MAb <i>(Detection)</i> , ELISA & LF
K01406M	MAb <i>(Capture),</i> ELISA & LF
K01407M	MAb <i>(Detection),</i> ELISA & LF
Pepsinoger	n II
K01404M	MAb <i>(Capture),</i> ELISA & LF
K01405M	MAb <i>(Detection),</i> ELISA & LF
PIVKA-II	
M01344M	MAb (Capture), ELISA
M01343M	MAb (Detection), ELISA
Prostate Sp	becific Antigen (PSA) Free
M92986M	MAb (<i>Capture</i>), ELISA
M92396M	MAb (<i>Detection</i>), ELISA
* Not cross reacti	ve to Albumin, AFP, CEA, PAP, CA125, CA19-9 or CA15-3.
M86506M	MAb (Capture/Detection), ELISA & LF
M86806M	MAb (Capture/Detection), ELISA & LF

Prostate Specific Antigen (PSA) Total

M66276M	MAb (Capture), ELISA & LF	
M86506M	MAb (Detection), ELISA & LF	
* Specific for	epitope 5 and not cross reactive with human kallikrein 2	2

M01236M	MAb <i>(Capture)</i> , ELISA & LF
M86506M	MAb (Detection), ELISA & LF

S-100 Beta

Q86006M MAb (*Capture*), ELISA **Q86610M** MAb (*Detection*), ELISA

Alpha Fetoprotein (AFP)

Q86003M	MAb <i>(Capture)</i> , ELISA
Q86610M	MAb (Detection), ELISA
* Each capture is	s specific for alpha-beta and each detection for alpha-beta
and bela-bela.	

Thyroglobulin

E01326M	MAb <i>(Capture)</i> , ELISA
E01325M	MAb (Detection), ELISA
* Does not int	erfere with anti-thyroglobulin auto-antibodie

Human Antigens (for use as standards, controls & calibrators)

A32260H Produced in cell culture, derived from a liver tumor cell and contains approximately 70% of the AFP-L3 isoform, \geq 95% pure (SDS-PAGE & WB) Beta 2 Microglobulin (B2M) A01412H From human urine, ≥ 98% pure (SDS-PAGE) CA15-3 A32231H Produced in cell culture, low cross reactivity **CA125** A32180H Produced in cell culture, low cross reactivity CA19-9 A86199H From native human metastatic liver carcinoma A01458H Produced in cell culture, provided as cell culture concentrate CA72-4 A01723H Produced in cell culture, low cross reactivity **CA50** A01264H Produced in cell culture, provided as cell culture concentrate CEA A32030H Produced in cell culture, > 50% pure (SDS-PAGE) A38151H From native human liver metastases, > 95% pure (SDS-PAGE) Cyfra 21-1 A32340H Produced in cell culture, low cross reactivity Human Hemoglobin (Fecal Occult Blood) A38192H From human erythrocytes, > 96% pure (SDS-PAGE)

A86803H From human brain, > 95% pure (SDS-PAGE) Pepsinogen II A01691H Purified from human stomach, lyophilized, ≥ 90% pure (SDS-PAGE)

Neuron Specific Enolase (NSE)

Pepsinogen II A01420H From human gastric mucosa, > 90% pure (SDS-PAGE) A01692H Purified from human stomach, lyophilized, ≥ 90% pure (SDS-PAGE) Prostate Specific Antigen (PSA) A01368H PSA, from human seminal fluid, lyophilized, > 95% pure (SDS-PAGE) A31029H PSA/ACT Complex, from human seminal fluid and plasma, > 95% pure (SDS-PAGE) A86878H PSA, From human seminal fluid, lyophilized, > 98% pure (SDS-PAGE) S-100 Beta A86809H From human brain tissue, contains both beta-beta and alpha-beta isoforms, > 95% pure A86289H From human brain tissue, contains only beta-beta homodimer, > 95% pure (SDS-PAGE) Thyroglobulin H6T08-747 From human thyroid tissue, > 98% pure (SDS-PSGE) A86852H From human thyroid tissue, > 90% pure (SDS-PAGE)

Product list

Abbreviations

6-His - Polyhistidine-tag

Aff.Pur. - Affinity Purified, analyte-specific column

Ag – Antigen

Alk.Phos. - Alkaline Phosphatase conjugated product

CLIA – Chemiluminescence Immunoassay

CVD – Cardiovascular Disease

DB – Dot Blot

DFA – Direct Immunofluorescence Assay

- FC Flow Cytometry
- FITC Fluorescein conjugated product
- **GST** Glutathione S-transferase
- HRP Horseradish peroxidase conjugated product

IB – Immunoblot

- ICC Immunocytochemistry
- IEP Immunoelectrophoresis
- IFA Immunofluorescence Assay
- IgG Immunoglobin G

IgM – Immunoglobin M

- IHC Immunohistochemistry
- **IP** Immunoprecipitation

LF - Lateral Flow

Lysate - Cells which have been lysed

MAb – Monoclonal antibody

Monospecific - Single band when tested by immunoelectrophoresis

Neat - Whole, unpurified, undiluted antisera

Neph – Product has been quality controlled by Nephelometry

PAb – Polyclonal antibody

Purified/IgG - Refer to the Certificate of Analysis regarding the extent of purification and the purification process used.

RIA – Radioimmunoassay

RID – Radial Immunodiffusion

SDS-PAGE – Sodium Dodecyl Sulfate Polyacrylamide Gel Electrophoresis

TIA – Product has been quality controlled by Turbidimetrv

WB – Western blot

Alpha 1 Antitrypsin (A1AT)

A1AT is a secretory glycoprotein mainly produced in the liver and monocytes. It is the most abundant serine protease inhibitor in human plasma. Several cancers are associated with A1AT deficiency including primary liver carcinoma, lung cancer, bladder cancer and malignant hepatoma.

Monoclonals

 Does not cross-react with alpha 1 antichymotrypsin H45200M

Alpha 2 Macroglobulin (A2M)

A2M functions as a universal protease inhibitor in serum and is capable of binding various cytokines and growth factors. Malignant tumors are able to synthesize and release proteins into the circulation, including A2M that protects the tumor against immune system attacks. A common variant of A2M has also been suggested to lead to an increased risk of Alzheimer's disease.

Polyclonals

CATALOG	SOURCE	FORMAT	APPLICATION
L04330G	Goat	Monospecific	IEP

Antigens

A50114H

- Native antigen from human plasma
- > 95% pure (SDS-PAGE), lyophilized

Alpha Fetoprotein (AFP)

AFP is a tumor marker used to help detect and diagnose cancers of the liver, testicles, and ovaries. AFP can be fractionated by affinity electrophoresis into 3 glycoforms: L1, L2, and L3. AFP-L3 is specific to malignant tumors. An AFP-L3 test is used to help evaluate the risk of developing hepatocellular carcinoma, especially in those with chronic liver disease, and also to evaluate response of hepatocellular carcinoma to treatment.

Monoclonals

- Does not cross-react with human serum albumin •
- Suitable for ELISA
- MAbs produced in vivo (unless otherwise noted)
- M01254M M01255M * Also works in LF assays M86304B
 - * Biotin conjugated

M86641M

M86501M * Reacts with AFP Receptor, suited to blocking AFP/ AFP-binding

Alpha Fetoprotein (AFP) continued

Antibody Pairs

- Suitable for ELISA MAbs produced in vivo (unless otherwise noted) CAPTURE DETECTION * Does not react with human albumin, H45610M H45301M ferritin, hCG or PSA MAM01-301 MAM01-210 * Does not react with human albumin M86304M M86641M **Polyclonals** CATALOG SOURCE FORMAT APPLICATION K92204R Rabbit Purified **ELISA** Antigens A01406H Native antigen from human cord serum Suitable for use in ELISA and WB > 99% pure (SDS-PAGE) A01407H Native antigen from human cord serum Suitable for use in ELISA and WB > 99% pure (SDS-PAGE), lyophilized A32260H Native antigen from human hepatocellular carcinoma cell line Contains approximately 70% of the AFP-L3 isoform
 - \geq 95% pure (SDS-PAGE)
 - Suitable for use in ELISA and WB

Amylase

Amylase is produced by the exocrine pancreas and the salivary glands to aid in the digestion of starch. Amylase enzyme levels may be increased in some pancreas, salivary, prostate, lung and ovarian tumors. In general, the blood amylase test is used to help diagnose and monitor acute pancreatitis.

Antigens

A01389P

A38120H	 Native alpha amylase from human pancreas Specific activity of 450 Units/mg protein (lot dependent) Purified and lyophilized
A38211H	 Native alpha amylase from human saliva Specific activity of 620 Units/mg protein (lot dependent)

- > 90% pure (SDS-PAGE), lyophilized
- Native alpha amylase from pig pancreas
 Specific activity of 640 Units/mg protein (lot dependent)
- Purified and lyophilized

Apolipoprotein CI (Apo CI)

Apo CI is the smallest member of the apolipoprotein family and is mainly distributed on the surface of very low density lipoprotein (VLDL) chylomicrons and high density lipoprotein. Apo CI is a potential serum marker for colorectal cancer, prostate cancer, breast cancer, lung cancer, thyroid carcinoma, malignant pleural mesothelioma, gastric cancer, pancreatic cancer and Wilms' tumor.

Polyclonals

	OURCE	FORMAT	APPLICATION
K74110R F	Rabbit	Aff.Pur.	ELISA.IB

Apolipoprotein E (Apo E)

Apo E is a class of apolipoproteins found in the chylomicron and intermediate-density lipoprotein. It has been linked to cardiovascular disease, Alzheimer's disease, dementia, atherosclerosis, multiple sclerosis, peripheral artery disease, diabetes, stroke, and most recently, cancer, including breast and ovarian cancer.

Monoclonals

- Reacts to the E2, E3 and E4 isoforms of apolipoprotein E
- Produced in vivo
- Suitable for ELISA, IHC, IP and WB H06579M

100379101

- Reacts with VLDL of human plasma
- Suitable for use in ELISA and IHC
- Produced in vivo, lyophilized
- H61529M

Polyclonals

CATALOG	SOURCE	FORMAT	APPLICATION	
G5C27-766	Goat	Aff.Pur.	N/A	
K34002G	Goat	HRP	ELISA,WB	
K74190G	Goat	Aff.Pur.	ELISA,WB	
K74180B	Goat	Biotin	ELISA,WB	
Antigens				
A50120H	 Native antigen from human plasma (VLDL) 			

• > 95% pure (SDS-PAGE)

Beta 2 Microglobulin (B2M)

B2M is a protein involved with MHC class I molecules which is found on the surface of almost all nucleated cells. Elevated levels of B2M are noted in lymphoproliferative disorders, neoplasms (malignant and benign), inflammatory disease, and autoimmune diseases such as systemic lupus erythematosus and Sjögren's disease. For cancer, it is not diagnostic for a specific type, but it has been associated with the amount of cancer present (tumor burden) and can be used as a prognostic tumor marker for some blood cell cancers.

Monoclonals

- Recognizes the HLA-B2M complex, free or associated with the membrane
- Suitable for use in FC, IHC and IFA
- Lyophilized

H42114M

- Reacts with soluble forms of B2M and B2M associated with cell-surface MHC Class I molecules and other membrane antigens
- Suitable for use in ELISA, WB, FC, IP, and RIA MCP17-301

Polyclonals

CATALOG	SOURCE	FORMAT	APPLICATION	
K01372G	Goat	Aff.Pur.	N/A	
Antigens				
A01447H	 Native antigen from human urine Suitable for use in ELISA ≥ 98% Purity (SDS-PAGE) 			
A01410H	 Native antigen from human urine > 98% Purity (SDS-PAGE), lyophilized 			
A01412H	 Native antigen from human urine ≥ 98% Purity (SDS-PAGE) 			
A01468H	 Recombinant (E.coli) ≥ 95% Pure (HPLC), lyophilized 			

Cadherin-E

Cadherin-E is a calcium dependent cell adhesion molecule expressed predominately in epithelial tissues. It plays an important role in the growth and development of cells via the mechanisms of tissue architecture and the maintenance of tissue integrity. It is an important determinant of tumor progression, serving as a suppressor of invasion and metastasis (loss of Cadherin-E function promotes tumor progression).

Monoclonals

- Recognizes Cadherin-E expressed on non-neuronal epithelial cells
- Suitable for use in IHC and IP
- Produced in vivo, lyophilized

P91176M

Calcitonin

Calcitonin is polypeptide hormone that is produced by the C-cells of the thyroid gland and it acts to reduce blood calcium (Ca2+), opposing the effects of parathyroid hormone (PTH). Calcitonin assay is used to identify patients with nodular thyroid diseases and to diagnose medullary thyroid cancer.

Antibody Pairs

- Suitable for use in CLIA, ELISA and RIA
- Recognizes Native Human Calcitonin
- CAPTURE DETECTION

E01357M E01356M

Calprotectin L1

Calprotectin L1 is a neutrophil-derived protein that can be quantified in the feces and has become an established marker of whole gut inflammation. Fecal calprotectin levels are associated with lifestyle risk factors for colorectal cancer.

Antibody Pairs

- Suitable for use in ELISA with stool samples
- MAbs produced in cell culture, lyophilized
- CAPTURE DETECTION

K01373M K01376M

- MAb to Calprotectin
- Produced in cell culture
- Suitable for ELISA and lateral flow

CAPTURE	DETECTION
9591	9591

Monoclonals

- Suitable for use in ELISA
- Produced in cell culture, lyophilized

K01374M

K01375M

Cancer Antigen 125 (CA125)

A protein in humans that is encoded by the MUC16 gene and found on the surface of many ovarian cancer cells. Monitoring CA125 blood serum levels is also useful for determining how ovarian cancer is responding to treatment and for predicting a patient's prognosis after treatment. CA125 can also be found in other cancers and in small amounts in normal tissue.

Antibody Pairs

 Detects b Suitable for MAbs pro 	oth Group A and Group B or use in ELISA and WB duced in <i>in vivo</i> DETECTION
M86306M M86306M	M86924M M86429M
Monoclona	ıls
 Suitable for MAbs pro M86306B M86429B 	or use in ELISA and WB duced <i>in vivo</i> * Specific to Group A, biotin conjugated * Specific to Group B, biotin conjugated
Antigens	
A01693H	Ovarian Cancer, Calibrator GradeLow cross-reactivity
A32180H	 Suitable for use as a calibrator for single or multiple analyte controls Low cross-reactivity ideal for multi-analyte panels Cell culture derived protein
A97180H	Cell culture derived protein from ovarian carcinoma cell lineSuitable for use in WB and RIA
A86125H	 Cell culture derived protein from human adenocarcinoma cell line Suitable for use as a calibrator
A86928H	 Cell culture derived protein from human adenocarcinoma cell line Suitable for use as a calibrator > 50% pure (SDS-PAGE)
A01690H	 Partially pure antigen from human fluids Low cross-reactivity Suitable for use in ELISA and Electrochemiluminescence assay as a calibrator or control

Please note that cell culture derived antigens offer several advantages over the native fluid versions, including greater availability of the product.

Cancer Antigen 15-3 (CA15-3 or MUC1)

CA15-3 is a tumor marker which corresponds to an immunodominant epitope in the extracellular portion of the membrane bound mucin MUC1. It is used to monitor a patient's response to breast cancer treatment and disease recurrence. CA15-3 and the associated CA27.29 are different epitopes on the same gene product.

Antibody Pairs

- Binds to an epitope within the VNTR tandem repeat peptide region of MUC1
- Suitable for use in ELISA and IHC
- MAbs produced in *in vivo*

CAPTURE	DETECTION	SPECIFIC FOR CA15-3
M86240M M86240M	M01289M M86240M	* Underglycosylated * Unglycosylated
Antigens		
A32231H	 Low cross-read Suitable for us Suitable for us Cell culture de cell line 	tivity ideal for multi-analyte panels e as a calibrator or control e in CLIA rived protein from human BTA
A86153H	 Native antigen Suitable for us immunogen for 	from human milk e as a calibrator or as an r antibody development
A32000H	 Suitable for us Cell culture de cell line 	e in CLIA and WB rived protein from human BTA
A01436H	 Native antigen High purity (rel Units/mL/OD2 Suitable for us 	from human fluids lative Purity Ratio: > 20,000 80nm) e in ELISA and WB

Please note that cell culture derived antigens offer several advantages over the native fluid versions, including greater availability of the product.

Cancer Antigen 19-9 (CA19-9)

Also called sialylated Lewis (a) antigen, CA19-9 is a tumor marker used primarily in the management of pancreatic cancer. CA19-9 is also elevated in many types of gastrointestinal cancer, such as colorectal cancer, esophageal cancer and hepatocellular carcinoma. Apart from cancer, elevated levels may also occur in pancreatitis, cirrhosis, and diseases of the bile ducts.

Monoclonals

- Suitable for IHC
- Produced in *in vivo* M01237M

Antibody Pairs

- Suitable for use in ELISA
- MAbs produced *in vivo* (unless otherwise noted)

CAPTURE	DETECTION	
M66106M	M66108M	
M66107M	M66106M	* Pair does not cross-react CA72-4, PSA, CA125, CA242, and CEA
M66107M	M66108M	
M66108M	M66106M	
Antigens		
A32502H	 Cell culture de adenocarcinon Suitable for us 	rived protein from human na cell line e in CLIA
A86199H	 Native antigen Suitable for us immunogen for 	from metastatic liver carcinoma e as a calibrator and an r antibody development

- A01458H Cell culture derived protein
 - Concentrated (~76,000 U/mL), lot dependent

Please note that cell culture derived antigens offer several advantages over the native fluid versions, including greater availability of the product.

Cancer Antigen 50 (CA50)

CA50 cancer antigen is a glycolipid and elevated levels of CA50 are found in liver cirrhosis and diseases of the pancreas. CA50 is most prevalent in gastrointestinal cancers, but can also be associated with cancer outside the digestive tract.

Antigens

A01264H • Cell culture derived protein

Please note that cell culture derived antigens offer several advantages over the native fluid versions, including greater availability of the product.

Cancer Antigen CA72-4 (TAG-72)

CA72-4 is a mucinous glycoprotein used as a tumor marker for gastric carcinoma and ovarian cancer (clinical studies demonstrated diagnostic specificity of more than 95%). Elevated CA72-4 levels in serum and plasma have also been reported in other cancers including carcinomas of the pancreas, stomach, gallbladder, colon, cervix and endometrium. There is a good correlation between serologic CA72-4 levels and tumor stage and size. It has been used as an independent marker for the therapeutic monitoring and follow-up care of ovarian cancer patients, in particular in CA125 negative patients.

Antibody Pairs

 Suitable for use in ELISA 			
 MAbs produced in vivo 			
CAP	TURE	DETECTION	
M013	341M	M01340M	
M013	342M	M01340M	

Cancer Antigen 242 (CA242)

CA242 is related to the sialylated Lewis (a) blood group antigen (Ag-CA19-9) but it is chemically and immunologically distinct. It is used as a tumor marker for the early diagnosis of pancreatic cancer. It has been demonstrated that the CA242 and CA19-9 epitopes are co-expressed on the same mucins, however the detailed structure of the CA242 epitope has not been established. CA242 is suggested to be more specific than CA19-9 in the diagnosis of pancreatic cancer and overall there are differences in the relative expression of CA19-9 and CA242 between benign and malignant diseases and between carcinomas of various organs.

Antigens

A01267H • Cell culture derived protein

• Suitable for use as a calibrator

Please note that cell culture derived antigens offer several advantages over the native fluid versions, including greater availability of the product.

Carcinoembryonic Antigen (CEA)

CEA is a type of glycoprotein molecule that is produced by cells of the gastrointestinal tract during embryonic development and CEA is generally present in low levels in the blood. Elevated levels of CEA are detectable in certain types of cancer and to-date CEA is the most widely used tumor marker for assessing prognosis, detecting recurrence and monitoring treatment in people with colorectal cancer. High levels of CEA are also detectable in cancers of the pancreas, stomach, breast, lung, medullary carcinoma of the thyroid, and ovarian cancer.

Monoclonals

- Suitable for use in enzyme conjugation, radio-labeling or solid phase immobilization
- Produced in vivo H45655M
- Suitable for use in FC
- Specific for epitope group V M01329M

Antibody Pairs

•	Suitable	for	use	in	ELISA

MAbs produce		
CAPTURE	DETECTION	_
MAM02-008	MAM02-009	
MAM02-009	MAM02-007	
MAM02-009	MAM02-008	
MAM02-009	MAM02-881	
M01250M	M01246M	* Also works in IHC

Polyclonals

CATALOG	SOURCE	FORMAT	APPLICATION
K10290G	Goat	Neat	ELISA
Antigens			
A01442H	 Native antigen from human fluids Suitable for use in ELISA ≥ 98% (SDS PAGE) 		
A86808H	Native antigen from human fluidsSuitable for use in ELISA		
A32030H	 Purified antigen from cell culture > 50% pure (SDS-PAGE) 		
A38151H	 Purified antigen from human colon adenocarcinoma cell line ≥ 95% pure (SDS-PAGE) 		

Please note that cell culture derived antigens offer several advantages over the native fluid versions, including greater availability of the product.

Catalase

Catalase is an important enzyme that protects cells from oxidative damage by reactive oxygen species. Catalase is frequently down-regulated in tumors although the underlying mechanism remains unclear. It has been recommended for use as a biomarker for the diagnosis, prognosis, and treatment of breast cancer.

Antigen

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A50136H
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- Native antigen from human erythrocyte
 95% pure (SDS-PAGE)
- > 50,000 units/mg protein (lot dependent)

CD1d

CD1d encodes a divergent member of the CD1 family of transmembrane glycoproteins, which are structurally related to the major histocompatibility complex (MHC) proteins and form heterodimers with beta-2-microglobulin. Studies have shown that breast cancer cells, through downregulation of CD1d and subsequent evasion of NKT-mediated antitumor immunity, gain increased potential for metastatic tumor progression.

Monoclonals

- Suitable for use in IHC and IP
- Produced in cell culture P01242M

CD3

CD3 consists of a protein complex with four chains and it is required for T-cell activation. CD3 expression can be detected at all stages of T-cell development. Studies have shown that patients with an unresponsive CD3 receptor have a significantly higher incidence of recurrent head and neck squamous cell carcinoma. CD3 is also under investigation as a target for immunosuppressant therapies for type 1 diabetes and other autoimmune diseases.

Monoclonals

Produced in vivo
MAL66-801

CD8

CD8 is a transmembrane glycoprotein that serves as a co-receptor for the T-cell receptor. CD8-positive T-cells represent a major arm of the cell-mediated anti-tumor response and a promising target for developing T-cell-based immunotherapies against lung cancer. The chronic presence of lung tumors induces dysfunctions in CD8-positive T-cells and sensitizes them to activation-induced cell death, which may be associated with poor clinical responses.

Monoclonals

 Produced in vivo MAL08-804

CD13 (Aminopeptidase N)

CD13 is a Zn²⁺ dependent membrane-bound ectopeptidase that preferentially degrades proteins and peptides with a N-terminal neutral amino acid. It has been associated with the growth of different human cancers and is suggested to be a suitable target for anti-cancerous therapy.

Monoclonals

- Suitable for use in FC and IHC
- Produced in cell culture, biotin conjugated P01150B

CD15

CD15 is a complex cluster of cell surface glycoproteins and glycolipids having a common terminal pentasaccaharide known as the Lewisx (Lex) antigen. In haematopathology, CD15 is important for the diagnosis of classical Hodgkin's disease and the characterization of acute leukemia. CD15 may be used for histopathological grading of gliomas and differentiating between malignant gliomas and non-neoplastic glial cells. Hepatocellular, gastric, and colonic carcinoma and thyroid medullary carcinoma also appear to have worse prognosis if positive for CD15.

Monoclonals

- Suitable for use in FC, IHC and IFA
- Produced in cell culture
 P01158B

CD24

CD24, a heat stable antigen, is a surface marker expressed in many tumor types. It has been identified as a marker of cancer stem cells (CSCs) and several studies suggest that CD24-positive tumors are related to a poor prognosis and for several cancer types.

Monoclonals

- Recognizes B-cells from pre-B to mature-B stage
- Suitable for use in FC and IHC
- Produced in vivo, lyophilized

P42118M

CD28

CD28 is one of the proteins expressed on T-cells that provides co-stimulatory signals required for T-cell activation and survival. It is also the receptor for CD80 and CD86 proteins. Studies have shown that it is a marker associated with tumoral expansion in multiple myeloma.

Monoclonals

- Induces T-cell proliferation in co-stimulation with CD2 monoclonal antibodies
- Suitable for use in FC
- Produced in vivo

P42235M

CD30

CD30 is a cell membrane protein of the tumor necrosis factor receptor family and a tumor marker. CD30 is associated with anaplastic large cell lymphoma. It is expressed in embryonal carcinoma and on classical Hodgkin Lymphoma Reed-Sternberg cells. In 2011, the FDA approved an agonistic anti-CD30 drug conjugate, Brentuximab vedotin, for the treatment for CD30-positive lymphomas

Monoclonals

- Suitable for use in FC, IHC and IFA
- Produced in vivo, lyophilized

P42705M

CD37

CD37 antigen is a transmembrane protein of the tetraspanin superfamily that is highly expressed on B-cells during the pre-B to peripheral mature B-cells. In normal tissues, CD37 expression is restricted to lymphoid tissues. However, CD37 is highly expressed on malignant B-cells in non-Hodgkin lymphoma and chronic lymphocytic leukemia which suggests that CD37 could be a promising therapeutic target for B-cell malignancies.

Monoclonals

- Suitable for use in ELISA, IHC and IP
- Produced in vivo

K8A069M

CD42

CD42 is a cell-surface glycoprotein involved in cell-cell interactions, cell adhesion and migration. It participates in a wide variety of cellular functions including lymphocyte activation, recirculation and homing, hematopoiesis, and tumor metastasis.

Monoclonals

- Specific for CD42b
- Suitable for use in FC
- Produced *in vivo*, lyophilized N42409M

CD49d

CD49d is an integrin alpha subunit composed of a β 4 (CD49d) and a β 1 (CD29) chain and serves as a receptor for fibronectin and VCAM-1. It is normally expressed on monocytes, T-cells, and eosinophils and mainly functions as a cell adhesion and signaling molecule. In cancer, it is an independent prognostic marker for disease progression in patients with chronic lymphocytic leukemia.

Monoclonals

- Suitable for use in FC and IFA
- Produced in vivo, lyophilized

P42764M

CD57

CD57 is a glycoprotein with cell adhesion functions normally expressed on NK-cells. It serves as a marker of NK cells and neuroendocrine tumors and helps distinguish high grade prostatic adenocarcinoma (CD57-positive) from high grade urothelial carcinoma (CD57-negative).

Monoclonals

- Suitable for use in WB, IHC and FC
- Produced in cell culture

P01287M

CD59

CD59 is a glycoprotein expressed on all human peripheral blood leukocytes, erythrocytes, and several human cell lines. It is a potent inhibitor of the complement membrane attack complex (MAC) action. Its overexpression has been observed in many types of solid cancers, such as pancreatic cancer and lung cancer.

Monoclonals

- Reacts with a well-defined epitope (W40, R-53) on CD59
- Suitable for use in FC and IP
- Produced cell culture

MAL59-043

CD66b

CD66b, also known as carcinoembryonic antigen-related cell adhesion molecule 8 (CEACAM8), is expressed mainly on granulocytes such as a GPI anchored molecule and its main functions are cell adhesion, cell migration, and pathogen binding. Under normal conditions, neutrophils have minimal expression of CD66b, however, in chronic myeloid leukemia its expression is upregulated.

Monoclonals

- Suitable for use in FC and IFA
- Produced in vivo, FITC labelled

P42531F

CD71

CD71, the transferrin receptor, is involved in the cellular uptake of iron and is expressed on cells with high proliferation. Data suggests that it might be implicated in promoting the growth of endocrine resistance in breast cancer and may serve as a prognostic marker of poor outcome and resistance to tamoxifen.

Monoclonals

- Recognizes soluble and bound transferrin receptor
- Suitable for use in ELISA and WB
- Produced cell culture

H01372M

- Suitable for use in ELISA and WB
- Produced in vivo

H86602M

CD90

CD90 is a cell surface glycoprotein involved in cell adhesion and cell communication in numerous cell types, but particularly in cells of the immune and nervous systems. It is widely used as a marker for hematopoietic stem cells and has been identified as a valuable marker to differentiate epithelioid mesothelioma from lung carcinoma. It may also function as a tumor suppressor in nasopharyngeal carcinoma.

Monoclonals

- Suitable for use in WB, IFA, FC, and IP
- Produced in cell culture

P01283M

CD105 (Endoglin)

CD105 is an accessory protein of the transforming growth factor-beta receptor system and is expressed on vascular endothelial cells. Studies have identified CD105 expression in several solid tumor types, with the level of expression correlating to various clinicopathologic factors including decreased survival and presence of metastases. It is an independent predictive marker for death risk and unflavorable prognosis in patients with renal cell carcinoma.

Monoclonals

- Suitable for use in WB, IP and FC
- Produced in vivo
- MAL105-226

CD147

CD147, an extracellular matrix metalloproteinase inducer, is correlated with tumor aggressiveness in various human malignanciesis including ovarian and gastric cancers. Its expression is highly associated with cancer invasion and metastasis and it has the potential to serve as a prognostic biomarker (e.g. poor outcome).

Monoclonals

- Recognizes an epitope in the N-terminal Ig domain (D1)
- Suitable for use in FC
- Produced in vivo

P87535M * Also works in WB and IP

CD177

CD177 is an important membrane glycoprotein on neutrophils and serves as a marker for myeloproliferative diseases. Loss of CD177 expression is linked to higher metastasis incidence and shorter survival in breast cancer patients.

Monoclonals

- Suitable for use in WB, FC and IP
- Produced in vivo

MAL177-166

CD195 (CCR5)

CD195 is a protein on the surface of white blood cells that is involved in the immune system and it acts as a receptor for chemokines, specifically CCL3 (MIP1 α), CCL4 (MIP1 β) and CCL5 (RANTES). It is also used by HIV (along with CXCR4) to enter target cells. CD195 has been implicated to play a role in the metastasis of breast cancer and colorectal cancer.

Monoclonals

- Suitable for use in FC
- Produced cell culture

P01240M

Centromere Protein B (CENPB)

CENPB is a highly conserved DNA protein that facilitates centromere formation. It is used as a serologic marker for autoimmune diseases, specifically sclerosis and other rheumatic conditions. It is also a potential biomarker of small-cell lung cancer and a prognostic marker for breast cancer (indicating prolonged survival).

Antigens

A01375H	 Recombinant (Sf9 Insect Cells)
	Suitable for use in ELISA and WB
	• > 95% pure (SDS-PAGE)
R01646	 Recombinant (Sf9 Insect Cells)
	 Suitable for use in ELISA and WB
	$\bullet > 90\%$ pure (SDS-PAGE)

c-Myc

c-Myc a multifunctional, nuclear phosphoprotein that plays a role in cell cycle progression, apoptosis and cellular transformation. A mutated version causing consituative expression of c-Myc is found in many cancers, including Burkitt lymphoma the cervical, ovarian, colon, breast, lung and stomach cancers.

Monoclonals

Produced in vivo
 MAB07-510 * Suitable for use in WB and IHC

Collagen Type VI

Collagen Type VI is a widely distributed extracellular matrix macromolecule that plays a crucial role in tissue development and is highly expressed in cancers. Studies show that it promotes chemotherapy resistance, and specifically in breast cancer it regulates cancer progression and metastasis.

Antigens A33129H

Native antigen from human placental villi

- Suitable for use as a standard, or for antibody production
- > 90% pure (SDS-PAGE)

Cyfra 21-1, Cytokeratin 19 Fragment

Cyfra 21-1 is a sensitive and specific tumor marker of lung cancer, especially of the squamous cell subtype. An assay for Cyfra 21-1 was first approved by the FDA in 2011 to monitor disease progression and treatment of lung cancer patients. It is also reported to be a potential biomarker for ovarian cancer.

Monoclonals

- Suitable for use in ELISA
- Produced in vivo

M01300M

Antigens

- A32340H
- Native antigen from MCF-7 Cell Supernatant
 Calibrator Grade with low cross-reactivity
- Suitable for use in CLIA

Defensin-beta

Human defensins are small cationic peptides produced by neutrophils and epithelial cells and they form two genetically distinct alpha and beta subfamilies. Defensins are involved in various aspects of the innate and acquired immune responses and recently, single nucleotide polymorphisms of beta-defensins have been correlated with increased susceptibility to cancer. Specifically, in oral cancer beta-defensins are down-regulated indicating that it may play a role in tumor suppression.

Monoclonals

Suitable	for	use	in	ELISA

Produced in cell culture, lyophilized
 EPITOPE BINDING

P24141M	a.a. 1-36, Defensin-beta 1	* Also works in WB
P24011M	a.a. 4-41, Defensin-beta 2	

Antigens

A24100H	 Synthetic peptide representing a.a. 4-41 (Defensin-beta 2) > 95% pure (HPLC), lyophilized
A24601H	 Synthetic peptide representing a.a. 3-39 (Defensin-beta 4) > 95% pure (HPLC), lyophilized

Desmin

Desmin is a type III intermediate filament in smooth muscle tissue and has a wide variety of functions. Several studies have shown that desmin is a highly sensitive marker for endothelial cell differentiation and tumor invasiveness in several types of cancers, including colon cancer, gastrointestinal stromal tumors, and embryonal sarcoma.

Monoclonals

 Produced in vivo MAM26-014

Disialoganglioside GD2

Disialoganglioside GD2 is a sialic-acid bearing glycolipid that is expressed on the surface of all mammalian cells. Studies have shown that they are important target antigens for antibody dependent cellular cytotoxicity of human melanoma and neuroblastoma cells. The relatively tumor-specific expression of GD2 makes it a suitable target for immunotherapy with monoclonal antibodies or with artificial T-cell receptors.

Antigens

A86168H

 Native antigen from human brain • > 98% pure (HPTLC), lyophilized

Elastase

Elastase is a serine proteinase and specifically the neutrophil form of Elastase is 218 amino acids long, with two asparaginelinked carbohydrate chains. It is secreted by neutrophils and macrophages during inflammation to destroy bacteria and host tissue. Research has shown that neutrophil Elastase can speed up the progression of cancer and the amount of immunoreactive neutrophil Elastase in tumor tissue is an independent prognostic indicator of patients with breast cancer and lung cancer.

Antigens

A01683H	 Native antigen from human neutrophils Suitable for use in ELISA and WB ≥ 90% pure SDS-PAGE (Chromatography) 		
A50145H	 Native antigen from human neutrophils > 95% pure (SDS-PAGE), lyophilized 		
Polyclonal	s		
CATALOG	SOURCE	FORMAT	APPLICATION
K90052C	Sheep	Purified	WB

Epidermal Growth Factor Receptor (EGFR)

EGF is a growth factor that stimulates cell growth, proliferation, and differentiation by binding to its receptor EGFR. Dysregulation of EGF and mutations that lead to EGFR overexpression have been associated with a number of cancers, including lung, breast and anal cancers as well as glioblastoma multiforme. Many therapeutic approaches are aimed at the EGFR such as cetuximab and panitumumab.

Monoclonals

- Suitable for use in ELISA (unless stated otherwise)
- Lyophilized
- Produced in cell culture (unless stated otherwise)

K67138M	* Recognizes the C-terminus a.a. 1165-1186, also works in IB, ICC and IP
P24100M	* Does not cross-react with v-erb-B, also works in IHC and FC
P24200M	* Does not cross-react with v-erb-B, also works in IHC and FC
K67190M	* Recognizes site phosphorylated at Serine 1047, also works in IB, ICC and IP
K67902M	* Recognizes site phosphorylated at Tyrosine 1173, also works in IB, ICC and IP
K67123M	* Recognizes site phosphorylated at Tyrosine 845, also works in IB
Antigens	
VTI880	• Recombinant EGF (P. pastoris)
	 Suitable for use in WB
	$\sim 95\%$ pure (SDS-PAGE)

- \geq 95% pure (SDS-PAGE)
- VTI882 • Recombinant EGF (P. pastoris)
 - Suitable for use in WB
 - > 95% pure (SDS-PAGE)

erbB-2, HER2/neu

Receptor tyrosine-protein kinase erbB-2 also frequently called HER2 (human epidermal growth factor receptor 2) is a member of the human epidermal growth factor receptor family. Overexpression of HER2 plays an important role in the development and progression of certain aggressive types of breast cancer. Approximately 15% of all newly diagnosed breast cancers are HER2-positive and the purpose of HER2 testing is to identify patients who could benefit from effective HER2-targeted therapies, such as trastuzumab (Herceptin), lapatinib (Tykerb), pertuzumab (Perjeta), and T-DM1 (Kadcylapatients).

Monoclonals

- Reacts with peptide ILDV4
 Suitable for use in ELISA
 Produced *in vivo*M01296M * Reacts with peptide ILDV4 (dephosphorylated)
 M01297M * Reacts with peptide ILDV4 (phosphorylated)
 M01298M * Reacts with peptide ILDV2 (dephosphorylated)
 M01299M * Reacts with peptide ILDV2 (phosphorylated)
 M01299M * Reacts with peptide ILDV2 (phosphorylated)
 Antigens
 R01605 Recombinant (HEK293 cells)
 - Recombinant (HEK293 cells)
 Suitable for use in ELISA
 - \geq 95% Pure (SDS-PAGE), lyophilized, contains a His-tag

Epithelial Cell Adhesion Molecule (EpCAM)

EpCAM is a glycoprotein involved in cell-cell adhesion, signaling, cell migration, proliferation, and differentiation. Its expression is restricted to normal epithelial cells in healthy individuals but in cancer, its expression distribution varies depending on the type of carcinoma. It is considered a tumor-associated antigen and may act as a potential prognostic marker for various cancers.

Monoclonals

• Suitable for use in ELISA and WB

• Produced in vivo

M01310M * Recognizes a.a. 116-242

Factor H (Beta 1H)

Factor H is a member of the regulators of the complement activation family and is a complement control protein. There are a number of clinical implications arising from aberrant factor H activity including stroke, schizophrenia and cancer. Specifically, it has been identified as a tumor marker for bladder cancer.

Polyclonals

-			
CATALOG	SOURCE	FORMAT	APPLICATION
K90030C	Sheep	Purified	DD,IE,IEP

Factor VIII (FVIII)

FVIII is an essential blood-clotting protein, also known as anti-hemophilic factor. Inhibitors to FVIII develop in malignancies which can lead to an acquired hemophilic state and an increased risk for deep vein thrombosis and pulmonary embolism.

Monoclonals

- Antibody binds human factor VIII A2 domain in immunoblotting techniques
- Suitable for use in ELISA and WB

N01277M

Glyceraldehyde-3-Phosphate Dehydrogenase (GAPDH)

GAPDH catalyzes the conversion of glyceraldehyde-3-phosphate to D-glycerate 1,3-bisphosphate which is the 6th step in the process of glycolysis. It is overexpressed in multiple human cancers, such as cutaneous melanoma, and its expression is positively correlated with tumor progression. It has also been implicated in several neurodegenerative diseases and disorders.

Monoclonals

- Suitable for use in ELISA and WB
- Produced in vivo, HRP conjugated

H86045P H86504P

 Reacts with monomeric and dimeric forms (not tetrameric form), also works in IFA and ICC

Antibody Pairs

• Suitable for us	se in ELISA	
• Produced in v	rivo	
CAPTURE	DETECTION	_
H86504M	H86045M	* Reacts with monomeric and dimeric forms (not tetrameric form), also works in WB

H86504M H86903M

Heat Shock Proteins

Heat shock proteins are involved in protein folding, stability, transport and transcriptional regulation. They are also known to participate in many pathological processes, such as asthma, intimal hyperplasia, and insulin resistance. In addition they have a cytoprotective role and are essential for cancer cell survival and are often upregulated in cancer. Specifically, HSP20 may have value as a prognostic tumor marker for colorectal cancer and HSP27 as a prognostic marker of prostate cancer.

Monoclonals

- Suitable for use in ELISA, WB and IFA
- Produced in vivo
- H86201M * Recognizes human recombinant HSP20 and HSP20 from human cardiac tissue

Hemoglobin

Hemoglobin is the iron-containing metalloprotein in red blood cells that transports oxygen. In diseases related to gastrointestinal bleeding such as colorectal cancer, hemoglobin is leaked into gastrointestinal tract and then discharged with the feces. Fecal occult blood tests (FOBT) are the specific name for assays that detect blood in the stool. Many commercial assays are ELISA or lateral flow based antigen detection assays that use antibodies specific to hemoglobin.

Antibody Pairs

•	Suitable	for use in ELISA
C٨	APTURE	DETECTION

H01417M H01416M *Hemoglobin

- MAb to Hemoglobin (FOB)
- Recognizes Human Hemoglobin
- Suitable for use in Lateral Flow and Turbidimetry (Latex)
 CAPTURE DETECTION

H01409M H01410M

Antigens

A01703N • Suitable for use in LF

• Purified, Liquid

Human Epididymis Protein 4 (HE4)

HE4 belongs to the family of whey acidic four-disulfide core proteins and currently, the biologic function of HE4 is unknown. Expression of HE4 is found in the glandular epithelium of the reproductive tract, distal renal tubules, and respiratory epithelium. In cancer, the highest serum levels of HE4 are found in epithelial cancer, serous ovarian cancer and endometrioid cancer. The main established application of HE4 is in posttherapy monitoring of ovarian cancer patients who had elevated pretreatment levels with little or no expression of CA125.

Antibody Pairs

Suitable fProduced	or use in ELISA <i>in vivo</i>
CAPTURE	DETECTION
M01323M	M01320M
M01323M	M01321M
M01323M	M01322M
Antigens	
A01469H	Native antigen from human epididymis cell lineSuitable for use in CLIA
A01466H	 Native antigen from human fluids Suitable for use in CLIA 90% Pure (SDS-PAGE)

Insulin Like Growth Factor I (IGF-I or Somatomedin C)

IGF-I is a peptide hormone involved in regulating human growth and development and is similar in molecular structure to insulin. It is produced primarily by the liver as an endocrine hormone and is a strong mitogen for a wide variety of cancer cell lines, including sarcoma, leukemia, and cancers of the prostate, breast, lung, colon, stomach, esophagus, liver, pancreas, kidney, thyroid, brain, ovary, and uterus (both cervical and endometrial).

Monoclonals

- Suitable for use in ELISA and RIA
- Produced in cell culture

E54061M

Insulin Like Growth Factor Binding Protein 3 (IGFBP-3)

IGFBP-3 is a transporter protein produced in the liver that is thought to regulate growth through its main binding protein Insulin-like growth factor-1 (IGF-1). High circulating concentrations of IGF-I are associated with an increased risk of cancer (especially breast cancer), whereas IGFBP-3 concentrations are associated with a decreased cancer risk.

Antibody Pairs

- Suitable for use in CLIA, ELISA and RIA
- Recognizes native and recombinant Human IGFBP-3
 CAPTURE DETECTION

K01411M K01410M

Integrin alpha M (CD11b/MAC-1)

The Integrin alpha M subunit, also known as MAC-1 alpha subunit or CD11b, combines with the integrin beta 2 subunit (CD18) to form the non-covalent heterodimer integrin alpha M/beta 2, also known as the MAC-1 receptor. Integrin alpha M has been suggested to be an independent prognostic factor of gastric cancer patients, as well as lymph node metastasis and tumor size.

Monoclonals

• Produced *in vivo*, FITC labelled P42530F

Interferon gamma (IFN-gamma)

IFN-gamma is a cytokine that plays physiologically important roles in promoting innate and adaptive immune responses. In cancer, it has been shown to prevent the development of primary tumors, regulate tumor growth and to promote the host response to tumor.

Monoclonals

 Suitable fo 	Suitable for use in ELISA		
 Produced i 	n vivo		
P18442M	* Neutralizing antibody, lyophilized		
P86424M	* Also works in WB		
	_		

Antibody Pairs

 Suitable for 	r use in ELISA and WB	
• Produced i	n vivo	
CAPTURE	DETECTION	
P86842M P01309M		

Interleukin 1 alpha (IL-1a) and Interleukin 1 Receptor (IL-1R)

IL-1a is a pleiotropic cytokine that is localized in the cytosol or cell membrane and is believed to regulate the intracellular environment. Its receptor is IL-1R and it is responsible for mediating its effects. It is known to be upregulated in many tumor types and has been implicated as a factor in tumor progression via the expression of metastatic and angiogenic genes and growth factors.

Antigens

- A42201H Re
 - Recombinant IL-1a (E. coli)
 - > 97% pure (HPLC and SDS-PAGE), lyophilized

Lactate Dehydrogenase (LDH)

LDH is an enzyme composed of four subunits that catalyzes the conversion of lactate to pyruvic acid. It is released during tissue damage and is involved in tumor initiation and metabolism. Studies have shown differential expression between the LDH isoenzymes and overall, LDH expression can act as a general marker in the prognosis of cancers. Specifically expression of LDH-5 in tumors and the stroma has been found to be a strong prognostic factor for diffuse or mixed-type gastric cancers.

Antigens	
A38357H	 Native LDH sources from human heart Specific Activity: 260 Units/mg protein (lot dependent) Purified by ammonium sulfate precipitation
A38155H	 Native LDH1 from human erythrocytes Specific Activity: 125 Units/mg protein (lot dependent) Ammonia sulfate suspension
A38252H	 Native LDH2 from human erythrocytes Specific Activity: 300 Units/mg protein (lot dependent) Ammonia sulfate suspension
438353H	 Native LDH3 from human erythrocytes Specific Activity: 240 Units/mg protein (lot dependent) Ammonia sulfate suspension
438454H	 Native LDH4 from human erythrocytes Specific Activity: 220 Units/mg protein (lot dependent) Ammonia sulfate suspension
A38558H	 Native LDH5 from human erythrocytes Specific Activity: 460 Units/mg protein (lot dependent) Ammonia sulfate suspension

Lamin

Lamins are the major component of the nuclear lamina with several functions including structural support of the nucleus, facilitating chromatin organization, gene regulation and DNA repair. They are often aberrantly expressed or localized in tumors and they are suggested to be a marker of good or poor patient survival depending on tumor subtype. In prostate cancer, lamins are specifically involved in cell proliferation, migration and invasion.

Polyclonals

CATALOG	SOURCE	FORMAT	APPLICATION
T24210R	Rabbit	Purified	IHC,WB
T24210R is specific for	or Lamin 5		

Antigens A24210H

- Native Lamin 5 from human foreskin keratinocytes
 - Suitable for use in WB
 - > 95% pure (SDS-PAGE)

Leptin

Leptin is a hormone made by adipose cells that helps to regulate energy balance by inhibiting hunger and regulating of fat stores. In the context of cancer, leptin expression can be induced under hypoxic conditions which often occurs in solid tumors. Leptin expression is upregulated in several types of cancer including breast, colorectal, prostate, ovarian, and lung cancer.

Monoclonals

- Suitable for use in IHC and ELISA
- Produced in vivo
- H4A342M * Reacts with C-terminal, a.a. 92-145

Antigens

A42327H • Recombinant (E. coli)

• > 95% pure (RP-HPLC and SDS-PAGE), lyophilized

Lysozyme

Lysozymes are enzymes that damage bacterial cell walls and they can be found in a number of secretions, such as tears, saliva, human milk, and mucus. In certain cancers (especially myelomonocytic leukemia) excessive production of lysozyme by cancer cells can lead to toxic levels of lysozyme in the blood leading to kidney failure and low blood potassium.

Antigens

A01399H

Recombinant (rice seed)90% pure (SDS-PAGE), lyophilized

Microtubule Associated Protein 2 (MAP-2)

MAP-2 is a protein involved in microtubule assembly, an essential step in neuritogenesis. Accumulating evidence shows that changes in the expression or post-translational modification of MAPs can contribute to the dysregulation of microtubule dynamics and consequently lead to the development of serious diseases, including cancer. MAP-2 has specifically been implicated to play a role in oral cancer.

Monoclonals

- Reacts with high molecular weight forms of MAP-2 (2a&2b)
- Suitable for use in WB and IHC (unless noted otherwise)
- Produced in cell culture

Q01119M

Mast Cell Tryptase (MCT)

MCT is considered to be an important marker of mast cell activation as well as an important mediator of inflammation and angiogenesis. It plays a role in pancreatic cancer angiogenesis and tumor growth and in breast cancer invasion and migration.

Monoclonals

- Recognizes alpha and beta isoforms of MCT
- Suitable for use in ELISA, WB and IHC
- Produced in cell culture

H01317M

Monocyte Chemotactic Protein 1 (MCP-1 or CCL2)

MCP-1 is a small cytokine that recruits monocytes, memory T-cells, and dendritic cells to the sites of inflammation produced by either tissue injury or infection. Increased MCP-1 serum levels have been seen in patients with various cancers and has been suggested to be a prognostic marker for solid tumors. It may also be a helpful tumor marker of prognosis in patients with digestive cancer, urogenital cancers, and head and neck cancers.

Antigens

A01251H • Recombinant (E. coli)

• > 98% pure (RP-HPLC & SDS-PAGE), lyophilized

Neutrophil Gelatinase-Associated Lipocalin (NGAL)/Lipocalin-2

NGAL is a secreted carrier protein that acts in the innate immune response and is used as a biomarker of kidney injury. It also functions as a growth factor and is highly expressed in early dysplastic lesions in the pancreas, suggesting a possible role as an early diagnostic marker for pancreatic cancer. In addition, serum NGAL might be a possible biomarker in pancreatitis and pancreatic adenocarcinoma.

Polyclonals

CATALOG	SOURCE	FORMAT	APPLICATION
K01392C	C. Eggs	Aff.Pur.	N/A
Antigens			

9278

- Recombinant (CHO cells)Suitable for use in WB
- \geq 95% pure (SDS-PAGE)

Neuron Specific Enolase (NSE) gamma

NSE is a glycolytic enzyme that catalyzes the conversion of phosphoglycerate to phosphoenol pyruvate and is the dominant enolase-isoenzyme found in neuronal and neuroendocrine tissues. NSE can be used to monitor disease progression and management in small cell lung cancer, and as an independent predictor of survival of non-small cell lung cancer.

Antibody Pairs

- Specific for the gamma subunit, no cross-reactivity with alpha or beta subunits
- Suitable for use in ELISA
- Produced in vivo

CAPTURE	DETECTION	
M86520M	M86101M	
M86406M	M86101M	
M86416M	M86101M	
M86141M	M86201M	
M86101M	M86520M	
Antigens		
A86803H	 Native antigen from human brain Subunit composition is gamma-gamma Suitable for use in ELISA > 95% pure (SDS-PAGE) 	
A01359H	 Recombinant (E. coli) Represents a.a. 2-434, contains a His-tag Suitable for use in ELISA, LF, WB, DB, and IHC > 95% pure (SDS-PAGE) 	
A01448H	 Recombinant (E. coli) Represents a.a. 1-434, contains a His-tag Suitable for use in ELISA ≥ 95% pure (SDS-PAGE) 	

Osteopontin (OPN)

OPN is an extracellular matrix protein involved in the regulation of normal mineralization in bone and teeth and is an important factor in bone remodeling. Various human cancers, including breast cancer, have been observed to express splice variants of OPN. Studies have shown that it is significantly associated with survival in several forms of cancer, suggesting its value as a clinical marker of tumor progression.

Monoclonals

- Specific to N-terminal (a.a. 1-166)
- Suitable for use in ELISA and WB
- Produced in vivo

M66102M

Antibody Pairs

- Suitable for use in ELISA and WB
- Produced in vivo

CAPTURE	DETECTION
M66103M	M66105M

Pepsinogen I and Pepsinogen II (Pepsinogen C)

Pepsinogen is a precursor of pepsin, a protease secreted in the stomach, and is immunologically categorized into two main classes, Pepsinogen I and Pepsinogen II. Serum Pepsinogen I/II ratio is widely used for the screening of gastric cancer and atrophic gastritis.

Antibody Pairs

Recognize	es Pepsinogen I	d Lata ed Elser
• Suitable fo	DETECTION	d Lateral Flow
K01402M K01406M	K01402M K01407M	
 Recognize Suitable for CAPTURE 	es Pepsinogen II or use in ELISA and DETECTION	d Lateral Flow.
K01404M	K01404M	
Antigens		
A01420H	 Native Pepsino Suitable for use 	gen II antigen e in WB

• > 90% pure (SDS-PAGE), lyophilized

PIVKA-II

Protein Induced by Vitamin K Absence or antagonist-II (PIVKA-II) has been shown to be a useful marker for the diagnosis of hepatocellular carcinoma (HCC), especially when combined with alpha-fetoprotein (AFP), which is the most commonly used tumor marker for HCC. Overall, assays detecting both PIVKA-II and AFP have been shown to achieve a sensitivity and specificity 94% and 98.5%, respectively.

Antibody Pairs

- Suitable for use in ELISA
- Cross reactivity:
 - Prothrombin <0.001%
 - Thrombin <0.001%
- Developed using a proprietary synthetic immunogen
- CAPTURE DETECTION

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M01344M M01343M
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Prolactin (PRL)

PRL is luteotropic hormone that plays an essential role in metabolism, regulation of the immune system, pancreatic development and lactation. It is synthesized and secreted in the anterior pituitary gland, breast tissue and decidua. A prolactin-secreting pituitary tumor is the most frequent cause of hyperprolactinemia which is associated with increased risk of breast cancer.

Antibody Pairs

•	Suitable	for	use	in	ELISA

• Produced in vivo

CAPIURE	DETECTION
E20122M	E20630M
E20630M	E20122M
MAF10-111	MAF10-145
MAF10-111	MAF10-710
MAF10-216	MAF10-245

Antigens

A01274H • F

• Recombinant (P. pastoris)

> 96% Pure (SDS-PAGE), lyophilized

Prostate Secretory Protein (PSP)

PSP is inhibin-like protein and one of the major secretory proteins of the prostate glands. It is postulated to play a role in cancer growth regulation and induction of apoptosis in prostate cancer cells. Low levels of PSP are associated with advanced prostate cancer.

Monoclonals

- Suitable for use in ELISA, WB and IHC
- Produced in vivo, lyophilized

M14248M

Prostate Specific Antigen (PSA)

PSA is a protease that makes semen more liquid by breaking down the high molecular weight protein of the seminal coagulum into smaller polypeptides. It exists in serum in multiple forms: complexed to alpha-1-anti-chymotrypsin (PSA-ACT complex), unbound (free PSA), and enveloped by alpha-2-macroglobulin. In men with prostate cancer or other prostate disorders, PSA levels are elevated and higher total PSA levels and lower percentages of free PSA are associated with higher risks of prostate cancer. The FDA first approved PSA as a screening assay for prostate cancer in the early 1990s.

Prostate Specific Antigen (PSA) continued

Monoclona	ls
Suitable for	r use in ELISA (unless otherwise noted)
Produced	in vivo
M01256M	* Reacts with PSA/ACT complex and free PSA
M92396P	* Reacts with total PSA, HRP conjugated
MAM07-234	* Only works in IHC

Total PSA (Free PSA and PSA complexed with ACT)

Antibody Pairs

- Suitable for use in ELISA
- Produced in vivo
- All antibodies are MAbs unless otherwise noted

CAPTURE	DETECTION	_
M86599M	M86506M	* Also works in LF
M01236M	M86506M	* Also works in LF
M66276M	M86506M	
M66279M	M86506M	
M66280M	M86506M	
M66276M	M66280M	
M66280M	M66276M	
M66279M	M66280M	
M66280M	M66279M	
M66280M	M66278M	
M66280M	M66281M	
M66278M	M66280M	
M66281M	M66280M	
M86506M	M86209M	

Free PSA

- **Antibody Pairs**
- Suitable for use in ELISA
- Produced in vivo
- All antibodies are MAbs (unless otherwise noted)

	CAPTL	JRE	DETECTION
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M92986M	M92396M	
M86806M	M86506M	* Also works in LF
M86506M	M86806M	* Also works in LF
M86209M	M86806M	
M66278M	M86806M	
M66280M	M86806M	
M66281M	M86806M	
M86433M	M86343M	
M86343M	M86433M	

Polyclonals

CATALOG	SOURCE	FORMAT	APPLICATION		
K31302G	Goat	Aff.Pur.	N/A		
Antigens					
A01444H	 Native PSA fr Suitable for u ≥96% PSA (S 	rom human ser se in ELISA SDS-PAGE)	ninal plasma		
A86878H	 Native PSA from human seminal fluid Suitable for use in ELISA, as an immunogen for antisera product or as a tracer for iodination >98% PSA (SDS-PAGE), lyophilized 				
A01368H	 Native PSA fr Suitable for u >95% PSA (S 	rom human ser se in ELISA SDS-PAGE), Iyo	ninal fluid philized		
A31029H	 Native PSA/A fluid and hum >95% PSA (S 	CT Complex fr nan plasma SDS-PAGE)	om human seminal		
A75029H	 Native PSA/A fluid and hum >99% PSA (S 	.CT Complex fr nan plasma SDS-PAGE)	om human seminal		
A01387H	 Native PSA fr High pl Isofor >96% PSA (S 	rom human ser rm SDS-PAGE)	ninal fluid		
A01238H	 Native PSA fr ≥96% pure (\$ 	om human ser SDS-PAGE)	ninal fluid		

Retinol Binding Protein 4 (RBP4)

RBP4 is an adipokine and is the specific carrier for retinol (vitamin A alcohol) in the blood. It is secreted by adipocytes and has been shown to potentially have a causative effect on the development of insulin resistance. In epithelial ovarian cancer, RBP4 has been suggested as a candidate diagnostic or prognostic biomarker.

Antibody Pairs

- Recognizes free RBP4 and RBP4/ transthyretin complex
- Reacts with apo-RBP4 and holo-RBP4
- Suitable for use in ELISA and WB (reducing conditions)
- Produced in vivo

CAPTURE	DETECTION
E01269M	E01268M
E01269M	E01267M
E01265M	E01270M

S-100

The S-100 family of proteins are involved in the regulation of a number of cellular processes including cell cycle progression and differentiation. Dysregulated expression of several S100 proteins is a common feature of human cancers, with each type of cancer showing a unique S100 protein profile. S-100 is suggested to be a diagnostic marker for differentiating amelanotic malignant melanomas end may also aid the detection of micrometastatic disease in the lymph nodes of melanoma patients.

Monoclonals

 Produced 	in vivo	
MEM24-211	* Works in IHC	
Q86403M	* Recognizes S-100 works in WB	(beta-beta) and S-100 (alpha-beta),
Antibody F	Pairs	
• Suitable for	or use in ELISA an	d IP
• MAbs pro	duced <i>in vivo</i>	
CAPTURE	DETECTION	_
Q86006M	Q86610M	* Specific for S-100 beta-beta and alpha-beta
Q86003M Q86610N		* Specific for S-100 beta-beta
Antigens		
A86809H	 Native antigen Contains beta- alpha-beta hete Suitable for EL as tracer for io > 95% pure, ly 	from human brain beta homodimer (S-100b) and erodimer (S-100a) ISA, for antibody production or dination rophilized
A86289H	 Native S-100b Suitable for EL as tracer for io > 95% pure, ly 	homodimer from human brain ISA, for antibody production or dination rophilized

Serum Amyloid A (SAA)

SAA is a sensitive marker of acute inflammation that is synthesized under the regulation of inflammatory cytokines during both acute and chronic inflammation. Increases in serum levels of SAA correlate with many types of carcinogenesis and neoplastic diseases. Specifically SAA has been suggested to be a potential tumor marker for renal cancer, lung cancer and uterine cervical cancer.

Antibody Pairs

- Recognizes native and recombinant human SAA
- Suitable for use in ELISA and WB
- MAbs produced in vivo

CAPTURE	DETECTION
H01381M	H01383M
H01382M	H01384M

Polyclonals

CATALOG	SOURCE	FORMAT	APPLICATION
H01379R	Rabbit	Purified	ELISA, IEP

Antigens

- R01619 Recombinant (E. coli)
 - 122 a.a. long with N-terminal His tag
 - Suitable for use in ELISA

Sialyl Lewis A and Sialyl Lewis X

Lewis blood group antigens are biosynthetically and structurally related carbohydrate structures used as markers of cell differentiation and embryonic development. Sialyl Lewis A and Sialyl Lewis X are specifically tumor-associated and involved in adhesion and metastatic potential of cancer cells. They are being used to identify new cancer biomarkers through antibody arrays paired with a glycan specific antibody to probe the bound glycoproteins, in identifying new ways to target cancer cells for therapy.

Monoclonals

- Produced in vivo
- MAM10-810 * Specific for Sialyl Lewis A MEM11-767 * Specific for Sialyl Lewis X

Superoxide Dismutase (SOD)

SODs are a group of metalloenzymes (containing Fe, Mn, or Cu and Zn) that are an important antioxidant defense in all living cells. Many human tumors have shown significant changes in the activity and expression of SODs. The ratio of MnSOD to CuZnSOD activity has been suggested as a potential biomarker for gastric adenocarcinoma.

Monoclonals

- Specific for Cu/Zn SOD
- Suitable for use in ELISA and WB
- Produced in vivo

H86141M

Thymus and Activation Regulated Chemokine (TARC)

TARC is a small CC chemokine that is constitutively expressed in the thymus. It is known to play an important role in Th2-mediated immune-inflammatory processes. Aberrant TARC expression is observed in many diseases including cancer, autoimmune disorders, and atherosclerosis. Serum TARC is a promising serum biomarker for gastric cancer and induces metastasis of breast cancer cells.

Antigens A28330H

• Recombinant (E. coli)

 >97% pure (SDS-PAGE and HPLC analysis), lyophilized

Thyroid Peroxidase (TPO)

TPO is a membrane thyroid enzyme essential for thyroid hormone synthesis and it is present in large quantities in the cytoplasm of normal thyrocytes. In malignant tumors, TPO synthesis is inhibited to varying degrees and maturation is deregulated resulting in overexpression of short splice variants. It has diagnostic utility as a tumor marker in thyroid cancer.

Monoclonals

Can be used for affinity purification of human TPO

• Produced *in vivo* F86415M

Antibody Pairs

• Suitable f	or use in ELISA
Produced	in vivo
CAPTURE	DETECTION
E01311M	E01309M
E01310M	E01309M
Antigens	
A01309H	 Recombinant (Baculovirus), a.a. 19-846 Suitable for use in ELISA and WB

• \geq 95% pure (SDS-PAGE), lyophilized

Thyroglobulin (Tg)

Thyroglobulin is a dimeric protein produced by the follicular cells of the thyroid and is the precursor of thyroid hormones thyroxine (T4) and triiodothyronine (T3). It is an FDA approved tumor marker to evaluate the effectiveness of treatment for differentiated thyroid cancer and to monitor for recurrence.

Antibody Pairs

- Suitable for use in ELISA
- Produced in vivo
- CAPTURE DETECTION

E01326M E01325M

Antigens

- A86852H
- Native antigen from human thyroid
 - Suitable for use as a standard, for antibody production or as a tracer for iodination
 - > 90% pure (SDS-PAGE), lyophilized

Tissue Transglutaminase (tTG)

tTG is a calcium-dependent enzyme which catalyzes the crosslinking of proteins and plays a role in apoptosis, cell adhesion, metastasis, and extracellular matrix assembly. tTG is particularly notable for being the autoantigen in coeliac disease and has also shown to play a role in regulating tumor growth and metastasis in breast cancer.

Antigens

A01363H	 Recombinant (HEK-293-EBNA cells)
	 Suitable for use in ELISA
	 95% pure (SDS-PAGE), lyophilized

Recombinant (Sf-21 Insect Cells)

- R01650
- Suitable for use in ELISA
- ≥ 90% Pure (SDS-PAGE)

Trypsin

Trypsin is a serine protease family member found in the digestive system where it hydrolyses proteins. It is expressed by many tumors and plays a significant role in tumor invasion, especially in stomach cancer cells. Elevated expression of trypsin in colorectal cancer also correlates with unfavorable clinicopathological characteristics and shortened survival.

Antigens

A50188H

Native antigen from human pancreas
> 95% pure (SDS-PAGE), lyophilized

Tumor Necrosis Factor alpha (TNF-alpha)

TNF-alpha is a cytokine produced by activated macrophages and is involved in the regulation of immune cells. Dysregulation of TNF production has been implicated in a variety of diseases including cancer, Alzheimer's, Psoriasis, and inflammatory bowel disease. In breast cancer, high TNF-alpha serum concentrations correlate with late-stage breast tumor phenotypes suggesting a role of TNF-alpha as a breast cancer marker.

Antibody Pairs

•	Suitable	for	use	in	ELISA,	IHC	and	neutralization
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• Produced in vivo

CAPTURE DETECTION

H86410M H86650M

Urokinase (uPA)

uPA is a serine protease used clinically as a thrombolytic agent in the treatment of severe or massive deep venous thrombosis, pulmonary embolism, and myocardial infarction. Substantial evidence implicates uPA, urokinase plasminogen activator receptor (uPAR) and plasminogen activator inhibitor-1 (PAI-1) in the neo-vascularization, invasion and metastasis of many solid tumors. Clinical studies have demonstrated an association between high levels of expression of this system in tumors and poor patient prognosis and outcome.

Polyclonals

CATALOG	SOURCE	FORMAT	APPLICATION
K63819R	Rabbit	Purified	ELISA,IHC,WB

Vitronectin

Vitronectin is a glycoprotein that regulates proteolysis initiated by plasminogen and is involved in hemostasis. Studies have shown that serum levels of Vitronectin are correlated with tumor size, and clinical stage suggesting that it could serve as a promising serum marker for the early diagnosis of breast cancer.

Monoclonals

- Suitable for use in ELISA and IB
- Produced in cell culture N77810M

Polyclonals

CATALOG	SOURCE	FORMAT	APPLICATION
K63964R	Rabbit	Purified	ELISA,WB
Antigens			

A63731H

Native antigen from human plasma
 OF% pure (SDS PACE)

> 95% pure (SDS-PAGE)





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VERITAS



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