

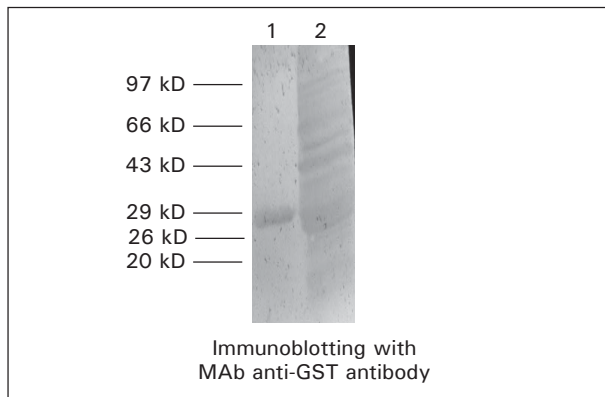
Monoclonal Antibodies

Monoclonal Anti-Glutathione-S-transferase (GST) Clone # 1A6B11

Description: This antibody was produced using purified recombinant Glutathione-S-transferase (GST) protein as immunogen. The antibody recognizes GST as fusion protein tag from several species. The product recognizes native as well as denatured reduced forms of purified and fused GST applying immunoblotting, dot blotting and ELISA. This antibody is of IgG1 isotype.

Working dilution in range of: 1:100-1:500 by ELISA

1:100-1:1000 by immunoblotting using purified recombinant GST or lysate of induced bacteria expressing GST



Lane 1 : 20 µg pure GST
Lane 2 : Crude Lysate of GST expressing bacteria

Ordering Information:

Product	Size	Cat #
Monoclonal Anti-Glutathione-S-transferase (GST) Clone # 1A6B11	0.5 ml	105644

Monoclonal anti-β-Galactosidase (β-Gal) Clone # 6C11D2

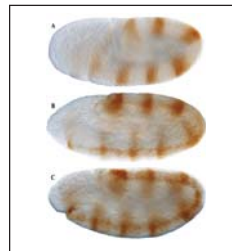
Description: This antibody is produced using β-D-Galactosidase from *E. coli* as immunogen. This antibody may be used for the detection of β-Galactosidase expressed by the *E. coli* lac z gene encoded in cloned gene sequences and serves as an indicator for fusion proteins. It is reactive in immunoblotting, as well as immunocytochemistry. Soluble β-Galactosidase may be detected by this antibody using ELISA or dot blot techniques. This antibody is of IgG1 isotype.

Working dilution in the range of:

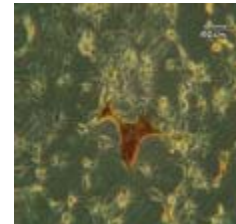
1:100-1:25,000 by ELISA

1:100-1:1000 by immunoblotting using denatured reduced *E. coli* β-Galactosidase

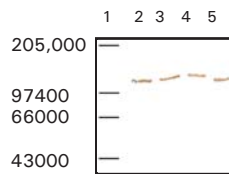
1:100-1:1000 by immunocytochemistry



Drosophila embryos carrying ftz-lacZ marker labelled with anti-β-Gal



Immunostaining of β-Gal transfected cells with 6C11D2



Immunoblotting: with various dilutions of anti β-gal Mab Ag Concentration 1 µg/Lane

Lane 1: Protein Molecular Weight Marker High Range
Lane 2: 1:500 Dilution.
Lane 3: 1:1000 Dilution
Lane 4: 1:2000 Dilution
Lane 5: 1:5000 Dilution

Ordering Information:

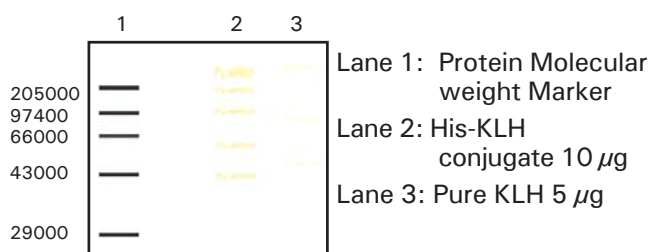
Product	Size	Cat #
Monoclonal anti-β-Galactosidase (β-Gal) Clone # 6C11D2	0.5 ml	105932

Monoclonal anti-Keyhole Limpet Hemocyanin (KLH) Clone # 1C10D2A1

Description: This antibody is produced using a peptide conjugated to keyhole limpet hemocyanin (KLH) as immunogen. It reacts with KLH in ELISA, dot blot and western blot using peptides conjugated to KLH. This antibody is of IgM isotype.

Working dilution in the range of:
1:100-1:500 by direct ELISA
1:2-1:50 by immunoblotting

Immunoblotting with MAb anti-KLH antibody



Ordering Information:

Product	Size	Cat #
Monoclonal anti-Hemocyanin (KLH) Clone # 1C10D2A1	0.5 ml	105933

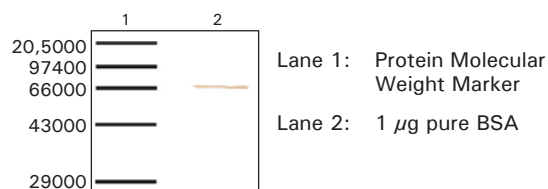
Monoclonal anti-Bovine Serum Albumin (BSA) Clone # 2H4E1

Description: This antibody is produced using a peptide conjugated to BSA as immunogen. It is highly reactive with the 65 kDa protein in immunoblotting. It may be used in ELISA and when purified, immunoaffinity purification or adsorption of BSA from biological fluids. This antibody is of IgM isotype.

Working dilution in the range of:

Neat-1:2 in ELISA
Neat-1:2 in immunoblotting

Immunoblotting with MAb anti-BSA antibody



Ordering Information:

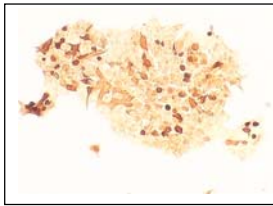
Product	Size	Cat #
Monoclonal anti-Bovine Serum Albumin (BSA) Clone # 2H4E1	0.5 ml	105934

GeNei™ Anti-Luciferase MAb

Description: GeNei™ Anti-Luciferase MAb is produced using firefly Luciferase as immunogen. This antibody may be used in the detection of Luciferase 'reporter gene' in cloned gene sequences. It is reactive in immunoblotting, immunocytochemistry as well as in ELISA techniques. This antibody is of IgG1 isotype.

Working dilution is at least:

- 1:3000 by ELISA
- 1:100 - 1:500 by immunocytochemistry
- 1: 2 by immunoblotting



Transfected COS-7 cells immuno stained for Luciferase

Ordering Information:

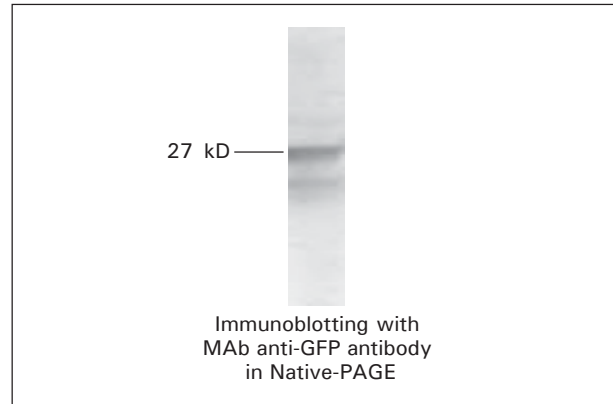
Product	Size	Cat #
GeNei™ Anti-Luciferase MAb	0.5 ml	107550

Monoclonal Anti-Green Fluorescent Protein (GFP) Clone # 1B3A8

Description: This antibody was produced using purified native GFP as immunogen. The antibody recognizes GFP (27 kD) using ELISA, immunohistochemistry, immunoprecipitation and immunoblotting under **non-denaturing conditions**. This antibody is of IgG1 isotype.

Working dilution is at least:

- 1:100 - 1:1000 by ELISA
- 1:100-1:1000 by immunocytochemistry
- 1:100-1:1000 by immunoblotting
- 1:2-1:1000 by immunoprecipitation

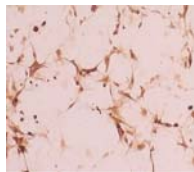


Ordering Information:

Product	Size	Cat #
Monoclonal Anti-Green Fluorescent Protein (GFP) Clone # 1B3A8	0.5 ml	105645

New Monoclonal Anti-Chloramphenicol Acetyl Transferase (CAT) Mab Clone # 3E9F4

Description: Antibody was produced using purified Chloramphenicol Acetyl Transferase as immunogen. This antibody may be used in the detection of 'CAT' reporter gene in cloned gene sequences in transfected cell lysates. It is reactive in all immunological techniques like ELISA, immunoblotting as well as immunocytochemistry. In immunoblotting it recognizes a 26kD protein-CAT. This antibody is of IgG1 isotype.



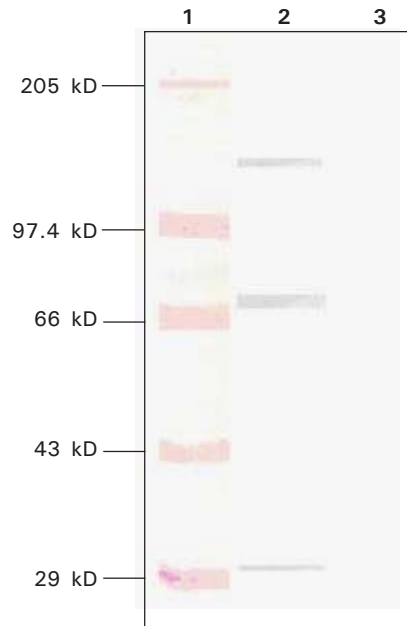
Transfected COS-7 Cells stained for CAT

Ordering Information:

Product	Size	Cat #
Monoclonal Anti-Chloramphenicol Acetyl Transferase (CAT) Mab Clone # 3E9F4	0.5 ml	117747

New Monoclonal Anti-PhosphoTyrosine Mab Clone# CRL-1955(ATCC)

Description: This antibody may be used in the detection of phosphorylated tyrosine residues in proteins by immunoblotting. This antibody is of IgG1 isotype.



Immunoblotting with anti-P-tyr-1Mab

Lane 1 : Protein Molecular Weight Marker-High

Lane 2 : Cell lysate of PMA induced Jurkat Cells

Lane 3 : Cell lysate of PMA uninduced Jurkat Cells

Ordering Information:

Product	Size	Cat #
Monoclonal Anti-Phospho Tyrosine Mab Clone # CRL-1955 (ATCC)	0.5 ml	117748

New Monoclonal Anti-Digoxin (Dig)

Description: This antibody was produced using purified Digoxin as immunogen. This antibody may be used in the detection of fragmented DNA as in apoptosis and in in-situ hybridization. It is reactive in all immunological techniques like ELISA, immunocytochemistry and insitu hybridization. This antibody is of IgG1 isotype.

Ordering Information:

Product	Size	Cat #
Monoclonal Anti-Digoxin (Dig) Clone #	0.5 ml	117750

New Monoclonal Anti-OKT-3

Clone # CRL-8001 (ATCC)

Description: This antibody may be used in complement fixation studies of human T cells and in assays involving study of activation of human T lymphocytes. This antibody is of IgG2a isotype.

Ordering Information:

Product	Size	Cat #
Monoclonal Anti-OKT-3 Clone # CRL-8001 (ATCC)	0.5 ml	117808

Polyclonal Antibodies

Description: Nomenclature of polyclonal antibody in this catalogue follows the syntax "*Host anti antigen*". Thus "rabbit anti human IgG" refers to antibody against "human IgG" raised in rabbit. Genei's polyclonal antibodies are raised against pure antigen using carefully selected animals and optimal long-term immunization protocol.

The antibodies are raised in rabbit or goat and isolated from serum.

Antibody Forms	Whole Serum	Ig Fraction	Affinity Purified
Description	Pool of selected sera from immunized animals.	Immunoglobulin (Ig) fraction prepared by salting out and ion exchange chromatography. Immunoglobulin content in the preparation is about 90%.	Antibodies are isolated from serum by antigen affinity chromatography with minimal cross reactivity. Active antibody is checked by QPA.
Presentation	Serum with 0.05% sodium azide.	Lyophilized powder. 1 vial reconstitute to 2 ml.	Solution in PBS
Titre by QPA	2.0 - 5 mg/ml	4.0 to 8 mg of antibody per vial.	Active antibody > 90%
Storage	-20°C	Below 0°C	-20°C.

Antibodies to Whole serum

Description: Antibodies to human and animal whole serum are developed in rabbit. The antibodies are evaluated by IEP and ODD. These antibodies are used in immunological techniques as controls and in preparation of immunological reagents. The antibodies are presented as whole serum.

Antibodies to Immunoglobulins (Secondary Antibodies)

These antibodies are developed against human and animal immunoglobulin-G (IgG) and chicken IgY. Pure IgG isolated from normal serum or IgY isolated from chicken egg yolk are used as an antigen to raise these antibodies. These antibodies are used as secondary antibodies in various immunological techniques such as RIA, ELISA, Western blotting, immunohistochemistry, etc.

Evaluations of the antibodies are done using two or more of the following tests. Ouchterlony double diffusion (ODD), immunoelectrophoresis (IEP), quantitative precipitin analysis (QPA), ELISA and Western Blotting tests.

The secondary antibodies developed in goat and rabbit are supplied in the following forms with minimum or no cross reaction.

Ordering Information:

Catalogue Number	Product	Pack Size
Anti human IgG		
105238	Goat anti-human IgG (whole serum)	5 ml
105237	Goat anti-human IgG (whole serum)	25 ml
105235	Rabbit anti-human IgG (whole serum)	5 ml
105177	Goat-anti human IgG (Affinity Purified)	5 mg
105175	Rabbit-anti human IgG (Affinity Purified)	5 mg
Anti bovine IgG		
105248	Rabbit anti-bovine IgG (whole serum)	5 ml
105185	Rabbit-anti bovine IgG (Affinity Purified)	5 mg
Anti Chicken IgY		
105250	Rabbit anti chicken IgY (whole serum)	5 ml
Anti goat IgG		
105228	Rabbit anti-goat IgG (whole serum)	5 ml
105170	Rabbit-anti goat IgG (Affinity Purified)	5 mg
Anti mouse IgG		
105246	Goat anti-mouse IgG (whole serum)	5 ml
105245	Goat anti-mouse IgG (whole serum)	25 ml
105240	Rabbit anti-mouse IgG (whole serum)	5 ml
105183	Goat-anti mouse IgG (Affinity Purified)	5 mg
105179	Rabbit-anti mouse IgG (Affinity Purified)	5 mg
Anti rabbit IgG		
105243	Goat anti-rabbit IgG (whole serum)	5 ml
105242	Goat anti-rabbit IgG (whole serum)	25 ml
105181	Goat-anti rabbit IgG (Affinity Purified)	5 mg
Anti GST (Glutathione S-Transferase)		
105226	Rabbit anti GST	5 ml
Anti whole serum		
105230	Rabbit anti goat serum	5 ml
105231	Rabbit anti human serum	5 ml
105234	Goat anti rabbit serum	5 ml

Conjugates of Secondary antibodies, Protein A, Avidin, Streptavidin or Biotin

Secondary antibody conjugates:

Secondary antibodies used in the conjugation are purified by immuno-affinity chromatography using antigen linked Sepharose®. This process yields antibodies with high avidity and minimum cross-reaction with other molecules. Conjugates of these antibodies react only with immunoglobulin-G.

Conjugates absorbed with other species serum proteins:

Selected secondary antibodies have been subjected to additional purification by passing them through Sepharose coupled with serum proteins of other species. This additional step, minimizes the cross reactivity with immunoglobulins of other species.

Conjugates of other proteins:

Protein A, avidin and streptavidin are conjugated with ALP, HRP and FITC and lectins are conjugated with FITC and biotin. Proteins having high activity and more than 95 % purity, are used for the conjugation.

Conjugates for detection of recombinant proteins:

Please refer index

Titration of the conjugates

Direct ELISA (dELISA):

Direct ELISA is done using 0.5 µg/100 µl antigen coated wells and 100 µl diluted conjugates. The conjugate is allowed to bind for 30 minutes at room temperature and then bound conjugate is estimated by using appropriate substrate. Substrates used are p-nitrophenyl phosphate (Cat # 106039) 1 mg/ml in 1 M diethanolamine, for ALP and TMB/H₂O₂ (Cat # 106035) or OPD 1 mg/ml in citrate phosphate buffer, for HRP. The dilution, which corresponds to an OD between 1.0 & 1.2 in ELISA reader is quoted as titre.

Direct immunoblot development (DIBD):

20 ng of antigen is spotted on NC membrane blocked with 5 % skimmed milk. The strip is incubated with diluted conjugate, washed and developed with appropriate substrate. BCIP/NBT (Cat # 106036) is used for ALP and TMB/H₂O₂ (Cat # 106037) is used for HRP. The maximum dilution of conjugate at which a visible antigen spot appeared is quoted as the titre.

Western Blot (WB):

Western blot is done using antigen 10 µg/lane on SDS PAGE and blot development with appropriate conjugate and substrate. The maximum dilution of conjugate at which a visible antigen band appeared is quoted as the titre.

Particulate immunofluorescent assay (PIFA):

The antigen immobilized cross-linked agarose beads are incubated with various dilutions of the conjugates, washed and viewed under fluorescent microscope. The maximum dilution of conjugate at which fluorescence of the beads is sufficient to take a clear picture is quoted as the titer.

Enzyme Conjugates:

Label	ALP	HRP
Source	Calf intestinal mucosa	Horseradish
Activity	4000 - 5000 DEA units/mg	200 - 250 purpurogallin units/mg
Conjugation method	Maleimide	Periodate
Molar Incorporation	1 - 2	2 - 3
Antibody/protein conc.	1 - 1.5 mg/ml	0.8 - 1.2 mg/ml
Storage	4° C	4° C
Titre	dELISA 1:10000 to 1:15000	dELISA 1:15000 to 1:35000
	DIBD 1:10000 to 1:15000	DIBD 1:15000 to 1:20000
	WB 1:2000 to 1:3000	WB 1:2000 to 1:5000
Applications	ELISA, Blot development, Immunohistochemistry	ELISA, Blot development, Immunohistochemistry

Fluorochrome Conjugates

Label	FITC	TRITC
Excitation Maximum λ nm	494	541
Emission Maximum λ nm	520	572
Conjugation method	Thiocyanate	Thiocyanate
Molar Incorporation	2 - 5	1 - 2
Antibody or protein concentration	1 - 1.2 mg/ml	1 - 1.2 mg/ml
Storage	4°C	4°C
Titre	PIFA 1:40 to 1:80	PIFA 1:40 to 1:80
Applications	Immunohistochemistry	Immunohistochemistry

Biotin Conjugates

Label	Biotin
Conjugation method	Succinimide
Spacer length	6 atom
Molar Incorporation	2 - 3
Antibody/protein conc.	1 - 1.2 mg/ml
Storage	4° C
Titre in ELISA	1: 15000 - 1:25000
Applications	ELISA, Blot development, Immunohistochemistry


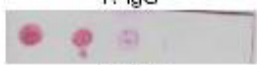
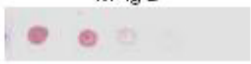



New

Gold Conjugates

(Goat anti-rabbit IgG-Gold, Goat anti-mouse IgG-gold, Goat anti-human, IgG-gold, Protein A-gold)

Secondary antibodies :

Antibodies are purified by Immuno-affinity chromatography, using antigen linked Agarose columns and further adsorbed by passing through other species serum proteins matrix to reduce nonspecific binding. The purified antibody is labeled with colloidal gold. Gold particles are mono-disperse and of moderate size (mean ≥ 15 nm), making the conjugate highly sensitive.

Colloidal Gold Conjugate	Antigen (IgG)	Sensitivity
Protein A	H IgG 	Up to 0.010 μ g
	R IgG 	Up to 0.10 μ g
	M IgG 	Up to 0.10 μ g
Goat anti Rabbit IgG	R IgG 	Up to 0.01 μ g
Goat anti Mouse IgG	Mouse IgG 	Up to 0.01 μ g
Goat anti Human IgG	H IgG 	Up to 0.01 μ g

Sensitivity Assay for different Gold Conjugates

TOOLS FOR PROTEOMIC RESEARCH

Ordering Information:

Catalogue Number	Product	Pack Size
Anti bovine IgG conjugates		
105220	Rabbit anti-bovine IgG - ALP	1 ml
105489	Rabbit anti bovine IgG - HRP	1 ml
Anti chicken IgY conjugates		
105208	Rabbit anti-chicken IgY - ALP	1 ml
105477	Rabbit anti chicken IgY-FITC	1 ml
105493	Rabbit anti chicken IgY - HRP	1 ml
Anti goat IgG conjugates		
105218	Rabbit anti-goat IgG - ALP	1 ml
105262	Rabbit anti goat IgG - biotin	1 ml
105482	Rabbit anti goat IgG - FITC	1 ml
105500	Rabbit anti-goat IgG - HRP	1 ml
106009	Rabbit anti goat IgG - TRITC	1 ml
Anti horse IgG conjugate		
105491	Rabbit anti horse IgG - HRP	1 ml
Anti human IgG conjugates*		
105211	Goat anti-human IgG - ALP	1 ml
105222	Rabbit anti-human IgG - ALP	1 ml
105257	Goat anti human IgG - biotin	1 ml
105476	Goat anti human IgG - FITC	1 ml
105494	Goat anti-human IgG - HRP	1 ml
105488	Rabbit anti-human IgG - HRP	1 ml
106006	Goat anti human IgG - TRITC	1 ml
*The antibodies used for these conjugates are specific to F _c fragment of human IgG.		

Ordering Information:

Catalogue Number	Product	Pack Size
Anti mouse IgG conjugates		
105215	Goat anti-mouse IgG - ALP	1 ml
105207	Goat anti-mouse IgG - ALP Adsorbed with Bovine, Human, Rabbit serum proteins	0.5 ml
105224	Rabbit anti-mouse IgG - ALP	1 ml
105261	Goat anti mouse IgG - biotin	1 ml
105481	Goat anti mouse IgG - FITC	1 ml
105480	Goat anti-mouse IgG-FITC Adsorbed with Bovine, Human, Rabbit serum proteins	0.5 ml
105483	Rabbit anti mouse IgG - FITC	1 ml
105502	Goat anti-mouse IgG - HRP	1 ml
105496	Goat anti-mouse IgG - HRP Adsorbed with Bovine, Human, Rabbit serum proteins	0.5 ml
105501	Rabbit anti-mouse IgG - HRP	1 ml
106008	Goat anti mouse IgG - TRITC	1 ml
106010	Rabbit anti mouse IgG - TRITC	1 ml
Anti rabbit IgG conjugates		
105209	Goat anti-rabbit IgG - ALP	1 ml
105206	Goat anti-rabbit IgG - ALP Adsorbed with Bovine, Human, Mouse serum proteins	0.5 ml
105260	Goat anti rabbit IgG - biotin	1 ml
105258	Goat anti-rabbit IgG - Biotin Adsorbed with Bovine, Human, Mouse serum proteins	0.5 ml
105478	Goat anti rabbit IgG - FITC	1 ml
105479	Goat anti-rabbit IgG-FITC Adsorbed with Bovine, Human, Mouse serum proteins	0.5 ml
106007	Goat anti rabbit IgG - TRITC	1 ml
105499	Goat anti-rabbit IgG - HRP	1 ml
105495	Goat anti-rabbit IgG - HRP Adsorbed with Bovine, Human, Mouse serum proteins	0.5 ml

continued to next page

Ordering Information:

Catalogue Number	Product	Pack Size
Anti rat IgG conjugates		
105492	Rabbit anti rat IgG - HRP	1 ml
Protein A conjugates		
105504	Protein A- HRP	1 ml
Streptavidin conjugates		
105217	Streptavidin - ALP	0.5 ml
105487	Streptavidin - FITC	0.5 ml
105505	Streptavidin - HRP	0.5 ml
Conjugates for Detection of Recombinant Proteins		
105497	GST MAb - HRP	0.2 ml
105498	Rabbit anti GST - HRP	0.5 ml
Gold conjugates		
117760	Goat anti-human IgG Gold Conjugate	1 ml
117758	Goat anti-rabbit IgG Gold Conjugate	1 ml
117759	Goat anti-mouse IgG Gold Conjugate	1 ml
117757	Protein A Gold Conjugate	1 ml

Enzymes and Substrates

Enzymes For ELISA

Alkaline Phosphatase

Alkaline phosphatase is purified from calf intestinal mucosa. Activity is 4500 to 6000 DEA Units per mg protein. The enzyme is supplied as a solution in 50% glycerol, containing 5 mM Tris (pH 7.0), 5 mM magnesium chloride and 0.1 mM zinc chloride.

The enzyme has been extensively used in the preparation of immunologicals.

Storage: 4°C. Do not freeze.

Horseradish Peroxidase

Enzyme Peroxidase is purified from horseradish. The preparation is essentially salt free. RZ value is > 3.0. Activity is 200-300 purpurogallin units per mg solid. The enzyme has been extensively used in the preparation of immunologicals.

Storage: Below 0°C.

Ordering Information:

Product	Size	Cat #
ALP	1 mg	105339
	5 mg	105338
HRP	10 mg	105340

Stable Substrates for ELISA

These products are supplied in liquid form and hence the need to weigh and prepare buffers or additional reagents before use is avoided. There is no wastage and every drop can be put to use.

TMB/H₂O₂ - For ELISA

(Tetramethyl benzidine/Hydrogen Peroxide)

TMB is a non-carcinogenic chromogen used in assays involving Horseradish Peroxidase enzyme. TMB/H₂O₂ - for ELISA produces a soluble blue colored product with HRP. The reaction is stopped with H₂SO₄ and the resulting yellow color is read at 450nm. This reagent is supplied at 20X concentration. Dilute 20 fold in distilled water just before use.

Storage: 4°C in dark.

p-NPP System for ELISA

p-NPP system is a ready to use two component liquid system used as substrate for alkaline phosphatase. The required amount can be prepared by mixing the two components. This substrate yields a soluble yellow reaction product with alkaline phosphatase in ELISA that can be read at 405 nm.

p-NPP system contains 10 ml of p-NPP solution and 200 ml of dilution buffer. Working solution is prepared by mixing one part of p-NPP solution with 19 parts of dilution buffer.

Ordering Information:

Product	Size	Cat #
TMB/H ₂ O ₂ for ELISA (20X)	10 ml	106035
pNPPSystem for ELISA	1 Set	106040

Substrate for ELISA

pNPP (4-Nitrophenyl Phosphate)

Description: Sodium salt of pNPP is a white to slightly yellow crystalline powder produces colourless to slightly yellow solution in water.

Purity: > 95%

Molecular Weight: 371.1

Formula: C₆H₄NO₆PNa₂.6H₂O

Application: Used as a substrate for alkaline phosphatase.

Ordering Information:

Product	Size	Cat #
pNPP	1 g	106039

Substrate for Western Blotting

BCIP/NBT

(5-bromo-4-chloro-3-indolyl phosphate/nitro blue tetrazolium)

Used in assays involving Alkaline Phosphatase enzyme and where an insoluble product is desirable. The reaction produces a bluish grey to black precipitate depending upon the enzyme concentration. This is supplied as a ready to use solution.

Storage: 4°C in dark.

TMB/H₂O₂ - For localization of HRP

TMB/H₂O₂ - For localization of HRP is supplied in a stabilized medium which produces blue stain on reacting with HRP. This substrate is useful in development of blots using HRP conjugates. The reagent is supplied as 10X concentrate. Dilute 10 fold in distilled water just before use.

DAB System

3-3'-diaminobenzidine tetrahydrochloride (DAB) is a substrate for horseradish peroxidase which yields a colored deposit which is insoluble in alcohol and xylene. It is a suitable substrate for immunomicroscopy. DAB is suitably packed so as to avoid unnecessary handling of DAB by investigator.

System contains the following

DAB	:	10 x 6 mg
Hydrogen peroxide	:	0.5 ml
Dilution buffer	:	100 ml

Storage: 4°C in dark.

New DAB Concentrate for HRP (50X)

3-3'-diaminobenzidine tetrahydrochloride substrate is useful for detection of HRP. It is suitable for staining tissue sections and for blot development using nitrocellulose, nylon and other membranes.

Highlights:

- Very High Sensitivity
- Low Background, High Intensity

Materials Provided

DAB concentrate (50X)	:	2 ml
Dilution Buffer	:	100 ml
H ₂ O ₂	:	0.5 ml

Ordering Information:

Product	Size	Cat #
BCIP/NBT	50 ml	106036
TMB / H ₂ O ₂ for localization	10 ml	106037
DAB System	1 Set	106038
DAB Concentrate for HRP (50X)	1 No.	117761

Normal Sera

Normal Sera are produced from healthy, nonimmunized animals and packed aseptically. Supplied with 0.05% Sodium azide.

Storage: -20°C

Ordering Information:

Product	Size	Cat #
Goat serum	10 ml	105939
Rabbit serum	10 ml	105941
Sheep serum	10 ml	105942
Bovine serum	10 ml	105943

Immunoglobulins

All animals immunoglobulin - G (IgGs) are prepared from pooled normal serum by fractionation and affinity or ion-exchange chromatography. Chicken IgY is isolated from chicken egg yolk by differential precipitation method. The purified IgGs are checked by SDS-PAGE and ELISA. IgGs are lyophilized with phosphate buffer.

Storage: Below 4°C

Ordering Information:

Product	Size	Cat #
Bovine IgG	10 mg	105541
Chicken IgY	10 mg	105542
Goat IgG	10 mg	105537
Human IgG	10 mg	105538
Mouse IgG	1 mg	105539
Rabbit IgG	10 mg	105540

Adjuvants

Freund's Incomplete Adjuvant

Freund's incomplete adjuvant is a mixture of mineral oil and mannide monooleate. The adjuvant is used for making emulsion of immunogen. The emulsified immunogen on injecting into host causes slow release of immunogen causing high and long lasting antibody response.

Freund's Complete Adjuvant

Freund's Complete adjuvant contains 1 mg of heat killed and dried *Mycobacterium smegmatis* per ml of Freund's incomplete adjuvant.

Storage: Room temperature.

Ordering Information:

Product	Size	Cat #
Freund's incomplete adjuvant	4 x 10 ml	105475
Freund's complete adjuvant	4 x 10 ml	105474

Proteins for Immunology Research

Albumin (Ovalbumin)

The albumin is purified from chicken egg white by repeated crystallization (normally for three times) till the protein purity is over 98% as analysed by polyacrylamide gel electrophoresis. Supplied as salt free lyophilized powder.

Lysozyme (Low nuclease activity)

The enzyme is known to hydrolyze β -1, 4 linkages between N-acetyl muramic acid and N-acetyl glucosamine in the cell wall of many micro organisms. The enzyme is useful for lysing gram positive and gram negative bacteria for subsequent isolation of nucleic acid. The enzyme is used in DNA extraction from *E.coli*. The cell lytic activity is 30,000 - 45,000 units per mg. Protein purity as tested by SDS gel electrophoresis is > 95%, M.W. 14,000.

Storage: - 20°C

Protein A

Protein A is isolated from *Staphylococcus aureus* culture fluid. This protein binds to Fc region of immunoglobulin G (IgG) molecule of several species without interacting with its antigen binding sites. Molecular weight is 47,000. Protein is supplied in lyophilized form and essentially saltfree.

Storage: Below 0°C.

BSA (Bovine Serum Albumin)

Albumin fraction V purified from Bovine serum supplied is a lyophilized powder that appears pale yellow.

Molecular Weight: 68000 Da

Purity: 98% by SDS - PAGE

Application: BSA can be used as a standard, stabilizer and as a buffer component in immunological techniques.

Store: Dry at 4°C

Ordering Information:

Product	Size	Cat #
Albumin (Ovalbumin)	1 g	105251
Lysozyme	500 mg	105253
	5 g	105252
Protein A	5 mg	105254
BSA	50 g	105256

Streptavidin

Isolated from *Streptomyces avidinii* having affinity for biotin. The biotin binding activity is 12 - 15 units/mg. The protein purity is more than 95% as assessed on SDS gel electrophoresis.

Storage: Below 0 °C.

Ordering Information:

Product	Size	Cat #
Streptavidin	1 mg	105190
Streptavidin	5 mg	105191

Lectins

Lectins are multivalent carbohydrate binding proteins. Specific lectins bind to certain specific sugars. Due to sugar specificity the agglutination response of lectins is highly specific, making them valuable probes for identification of sugars on the surface of cells. Thus lectins have been used to discriminate between blood groups, transformed cells and also for certain other applications. All lectins are provided in purified lyophilized powder form.

Concanavalin A (Con A)

(*Canavalia ensiformis*; Jack bean)

Con A recognizes a commonly occurring sugar structure, α -linked mannose. Con A has been utilized in hormone receptor studies, mitogenic assays, characterization of normal and malignant cells, glycoprotein purification, viral antigen isolation, dextran and mannan fractionation, cell agglutination studies, bacterial aggregation, etc.

Phytohemagglutinin

(From *Phaseolus vulgaris*, red kidney bean)

Phytohemagglutinin is supplied as a freeze dried powder of "P" form (PHA-P) which is a mixture of PHA-E and PHA-L.

Erythroagglutinin (PHA-E) has low mitogenic activity and high erythroagglutinating activity. Leucoagglutinin (PHA-L), has high mitogenic and low erythroagglutinating activity.

Storage: Below 0°C

Wheat Germ Lectin

(*Triticum vulgaris*)

Wheat germ agglutinin binds to N-acetyl glucosamine preferentially in its dimeric and trimeric form. Wheat germ agglutinin and its conjugate are used in glycoprotein studies.

Ordering Information:

Product	Size	Cat #
Concanavalin A	40 mg	105616
Phytohemagglutinin	10 mg	105617