DETECTION AND PURIFICATION

Detection and Purification Selection Guide

Product Number	Package Size	Description	Characteristics	Applications
Polyhistidine/Histidine				
H 1029	0.2 ml 0.5 ml	Monoclonal Anti-PolyHistidine, Clone HIS-1	**Specificity:** N-terminal Polyhistidine fusion proteins. **Note:** Weakly recognizes C-terminal Polyhistidine fusion proteins. **Form:** Ascites fluid with 15 mM sodium azide as a preservative.	• Western blotting • Immunoprecipitation • Dot blotting • ELISA **Working Dilution:** • 1:3,000 by indirect Western blotting using lysate of induced bacteria expressing a polyhistidine tagged protein
A 5588	0.5 ml	Monoclonal Anti-PolyHistidine, Clone HIS-1, Alkaline Phosphatase Conjugate	**Specificity:** N-terminal polyhistidine fusion proteins. **Note:** Weakly recognizes C-terminal polyhistidine fusion proteins. **Form:** Solution in 0.05 M Tris buffer, pH 8.0, containing 1% BSA, 1.0 mM $MgCl_2$, 50% glycerol and 15 mM sodium azide.	• Western blotting • Dot blotting • ELISA **Working Dilution:** • 1:2,000 by Western blotting (colorimetric) using lysates of *E. coli* induced to express polyhistidine tagged protein
A 7058	1 vl	Monoclonal Anti-PolyHistidine, Clone HIS-1, Peroxidase (HRP) Conjugate	**Specificity:** N-terminal polyhistidine fusion proteins. **Note:** Weakly recognizes C-terminal polyhistidine fusion proteins. **Form:** Lyophilized powder. Reconstitution with 0.5 ml of water results in a solution of 0.01 M sodium phosphate buffered saline containing 1% BSA and 0.01% thimerosal.	• Western blotting • Dot blotting • ELISA **Working Dilution:** • 1:2,000 by Western blotting using lysate of induced bacteria expressing polyhistidine tagged protein
HA				
A 2095	1 ml	Anti-HA Agarose Affinity Gel	**Specificity:** N-terminal or C-terminal HA-tagged (YPYDVPDYA) fusion proteins **Binding Capacity:** 30-50 nmoles of HA tagged fusion protein per 1 ml of settled resin. **Elution:** At least 3.5 nmoles of HA-tagged fusion protein per ml of settled resin, as determined using HA-tagged fusion protein of 120 kDa and low pH elution buffer. **Form:** Suspension 50% (v:v) in 0.01 M phosphate buffered saline, containing 15 mM sodium azide. Specific antibody concentration is 2.0-2.4 mg/ml settled resin.	• Immunoprecipitation • Immunoaffinity purification
E 6779	1 ml	EZview™ Anti-HA Agarose Affinity Gel	**Specificity:** N-terminal or C-terminal HA-tagged (YPYDVPDYA) fusion proteins **Binding Capacity:** 0.4 mg HA-tagged fusion protein per ml of affinity gel. **Form:** Suspension of red colored beaded agarose in phosphate buffered saline containing 50% glycerol and 0.0015% Kathon® CG/IPCII as an antimicrobial preservative	• Immunoprecipitation
I 2149	0.5 mg 1 mg	HA Peptide	**Sequence:** Tyr-Pro-Tyr-Asp-Val-Pro-Asp-Tyr-Ala **MW:** 1102.2 **Form:** Lyophilized powder	Sequence used in recombinant HA epitope tagged proteins. Epitope recognized by anti-HA monoclonal antibodies
H 9658	0.2 ml	Monoclonal Anti-HA Tag, Clone HA-7	**Specificity:** N-terminal or C-terminal HA-tagged (YPYDVPDYA) fusion proteins **Form:** Mouse ascites fluid with 15 mM sodium azide as a preservative.	• ELISA • Immunocytochemistry • Immunoprecipitation • Western blotting **Working Dilution:** • 1:10,000 by Western blotting (colorimetric)

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H 6908	0.2 ml 0.5 ml	Anti-HA Tag, Affinity Isolated Rabbit Antibody	**Specificity:** N-terminal and C-terminal HA-tagged (YPYDVPDYA) fusion proteins **Form:** Affinity isolated rabbit antibody in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 15 mM sodium azide.	• Western blotting • Immunoprecipitation • Immunocytochemistry **Working Dilution:** • 1:50 by indirect immunofluorescence using HA-tagged fusion protein transfected cells • 1:200 by immunoprecipitation using HA-tagged fusion protein from cell lysates. • 1:1,000 by Western blotting (colorimetric) using HA-tagged fusion protein transfected cell extracts
B 9183	100 µg	Monoclonal Anti-HA, Biotin Conjugate antibody produced in mouse	**Specificity:** N- and C-terminal HA-tagged fusion proteins **Form:** Solution in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 15 mM sodium azide as a preservative	• Indirect immunoblotting (chemiluminescent) **Working Dilution:** • 0.25-0.50 µg/mL using HA-tagged fusion proteins in transiently transfected mammalian cell extracts
A 5477	500 µg	Monoclonal Anti-HA-Alkaline phosphatase conjugate	**Specificity:** N-terminal and C-terminal HA-tagged (YPYDVPDYA) fusion proteins. **Form:** Purified immunoglobulin solution in 0.05 M Tris buffer, pH 8.0, containing 1% bovine serum albumin, 1 mM $MgCl_2$, 50% glycerol, and 15 mM sodium azide as a preservative	• Western blotting **Working Dilution:** • 1:4000 on mammalian cell extracts expressing HA-tagged fusion proteins
H 6533	1 vl	Monoclonal Anti-HA Tag, Clone HA-7, Peroxidase Conjugate	**Specificity:** N-terminal or C-terminal HA-tagged (YPYDVPDYA) fusion proteins **Form:** Lyophilized powder and should be reconstituted with 0.5 ml of water.	• Western blotting **Working Dilution:** • 1:4,000-8,000 by Western blotting (colorimetric)
H 7411	100 µg	Monoclonal Anti-HA, FITC conjugate antibody produced in mouse	**Specificity:** N- and C-terminal HA fusion proteins **Form:** Solution in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 15 mM sodium azide as a preservative	• Immunocytochemistry **Working Dilution:** • 1-5 µg/mL using HA-tagged fusion protein transfected into mammalian cells fixed with paraformaldehyde
H 9037	200 µg	Anti-HA, Rhodamine conjugate	**Specificity:** N-terminal and C-terminal HA-tagged (YPYDVPDYA) fusion proteins **Form:** Purified immunoglobulin solution in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin 15 mM sodium azide as a preservative	• Immunofluorescence **Working Dilution:** • 10-15 µg/ml on mammalian cells expressing HA-tagged fusion proteins
c-Myc				
A 7470	1 ml	Anti-c-Myc Agarose Affinity Gel	**Specificity:** N-terminal or C-terminal c-Myc tagged (Glu-Gln-Lys-Leu-Ile-Ser-Glu-Glu-Asp-Leu) fusion proteins. **Binding Capacity:** 2 nmoles c-Myc fusion protein per 1 ml a settled resin **Elution:** 1.5 nmoles c-Myc fusion protein per 1 ml a settled resin **Form:** 50% (v/v) Suspension in 0.01 M phosphate buffered saline, containing 15 mM sodium azide.	• Immunoprecipitation • Immunoaffinity purification
E 6654	1 ml 5 x 1 ml	EZview Red Anti-c-Myc Affinity Gel	**Specificity:** c-Myc tagged fusion proteins **Form:** Suspension of red colored beaded agarose in phosphate buffered saline containing 50% glycerol and 0.0015% Kathon® CG/IPCII as an antimicrobial preservative	• Immunoprecipitation
P 2241	1 each 5 each	c-Myc Coated HS 96-Well Plates	**Specificity:** N-terminal or C-terminal c-Myc tagged (Glu-Gln-Lys-Leu-Ile-Ser-Glu-Glu-Asp-Leu) fusion proteins. **Sensitivity:** ≤1 ng/well.	• Screening for expression • Protein-Protein interactions • ELISA
M 2435	4 mg 25 mg	c-Myc Peptide	c-Myc Peptide is a synthetic peptide corresponding to amino acids 410-419 of the C-terminal of human c-Myc. **Sequence:** N-Glu-Gln-Lys-Leu-Ile-Ser-Glu-Glu-Asp-Leu-C **MW:** 1203.3 **Form:** Lyophilized powder	• Inhibition of antibody staining by c-Myc antibodies **Titer:** 5-10 µg/ml for inhibition of antibody staining in Western blotting.

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M 4439	0.1 ml	Monoclonal Anti-c-Myc, Clone 9E10, purified	**Specificity:** N-terminal or C-terminal c-Myc tagged (Glu-Gln-Lys-Leu-Ile-Ser-Glu-Glu-Asp-Leu) fusion proteins. **Form:** Purified IgG in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.	• Screening for expression • Immunoprecipitation • Immunocytochemistry • Immunohistochemistry • ELISA • Western blotting **Working Dilution:** • Minimum dilution of 1:5000 by immunoblotting of *E. coli* extract expressing recombinant c-Myc-tagged fusion protein.
M 5546	0.2 ml 0.5 ml	Monoclonal Anti-c-Myc, Clone 9E10	**Specificity:** N-terminal or C-terminal c-Myc tagged (Glu-Gln-Lys-Leu-Ile-Ser-Glu-Glu-Asp-Leu) fusion proteins. **Form:** Mouse ascites fluid with 15 mM sodium azide as a preservative.	• Western blotting • Immunoprecipitation of c-Myc-tagged fusion proteins but not native or denatured c-Myc protein from cell lysate • Immunohistochemistry • Electron microscopy • ELISA **Working Dilution:** • 1:100 by Western blotting (colorimetric) using a c-Myc-tagged fusion protein
C 3956	0.2 mg	Anti-c-Myc, Polyclonal, Affinity Isolated Rabbit Antibody	**Specificity:** N-terminal or C-terminal c-Myc tagged (Glu-Gln-Lys-Leu-Ile-Ser-Glu-Glu-Asp-Leu) fusion proteins. Developed using a peptide corresponding to amino acids 408-425 of the human *c-Myc* proto-oncogene, conjugated to maleimide-activated KLH through a C-terminal added cysteine residue. **Form:** Affinity isolated antibody at approximately 0.5 mg/ml in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 15 mM sodium azide.	• Western blotting • Immunoprecipitation • Immunocytochemistry **Working Dilution:** • By Western blotting, at least 1.0 µg/ml of the antibody can detect c-Myc fusion proteins in cell extracts from transfected cultures as well as bacterial lysates • 5-10 µg/ml for indirect immunofluorescence staining in methanol-acetone fixed transiently transfected cells
B 7554	100 µg	Monoclonal Anti-c-Myc Biotin Conjugate antibody produced in mouse	**Specificity:** N-terminal or C-terminal c-Myc tagged (Glu-Gln-Lys-Leu-Ile-Ser-Glu-Glu-Asp-Leu) fusion proteins **Form:** Solution in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 15 mM sodium azide as a preservative	• Indirect immunoblotting (chemiluminescent) **Working Dilution:** • 0.05-0.1 µg/mL using Extract of 293T cells expressing c-Myc tagged fusion protein
A 5963	0.5 ml	Monoclonal Anti-c-Myc, Clone 9E10, Alkaline Phosphatase Conjugate	**Specificity:** N-terminal or C-terminal c-Myc tagged (Glu-Gln-Lys-Leu-Ile-Ser-Glu-Glu-Asp-Leu) fusion proteins. **Form:** Purified immunoglobulin solution in 0.05 M Tris buffer, containing 1% bovine serum albumin, 1 mM $MgCl_2$, 50% glycerol, and 15 mM sodium azide.	• Western blotting **Working Dilution:** • 1:100 by Western blotting (colorimetric) using a c-Myc tagged fusion protein
A 5598	0.5 mg	Anti-c-Myc, Peroxidase conjugate, Affinity Isolated Antibody	**Specificity:** N-terminal or C-terminal c-Myc tagged (Glu-Gln-Lys-Leu-Ile-Ser-Glu-Glu-Asp-Leu) fusion proteins. **Form:** Affinity Isolated rabbit antibody in 0.01 M phosphate buffered saline, pH 7.4, containing 0.01% merthiolate.	• Screening for Expression • Western blotting **Working Dilution:** • Minimum dilution of 1:5000 by immunoblotting of *E. coli* extract expressing recombinant c-Myc-tagged fusion protein.
F 2047	100 µg	Monoclonal Anti-c-Myc FITC Conjugate antibody produced in mouse, Clone 9E10	**Specificity:** N-terminal or C-terminal c-Myc tagged (Glu-Gln-Lys-Leu-Ile-Ser-Glu-Glu-Asp-Leu) fusion proteins **Form:** Solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative	• Immunocytochemistry **Working Dilution:** • 5.0 µg/mL using mammalian cells transfected with c-Myc tagged fusion protein, fixed with paraformaldehyde

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C 6594	0.5 ml	Monoclonal Anti-c-Myc, Clone 9E10, Cy3 Conjugate	**Specificity:** N-terminal or C-terminal c-Myc tagged (Glu-Gln-Lys-Leu-Ile-Ser-Glu-Glu-Asp-Leu) fusion proteins. **Form:** Purified mouse immunoglobulin supplied in 0.01 M sodium phosphate buffered saline, containing 1% bovine serum albumin and 15 mM sodium azide.	• Immunofluorescent Immunocytochemistry • Immunofluorescent Immunohistochemistry **Working Dilution:** • 1:50 by direct immuno-fluorescence using formalin-fixed, paraffin-embedded human colon carcinoma tissue
T7				
T 8823	200 µg	Monoclonal anti-T7 tag, clone T7tag, purified	**Specificity:** T7-tagged (MASMTGGQQMG) fusion proteins **Form:** Solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative	• Western Blotting **Working Dilution:** • 1-2 µg/ml on bacterial extracts expressing recombinant T7-tagged fusion protein
T 3699	1 vl	Monoclonal anti-T7 tag, peroxidase conjugate	**Specificity:** T7-tagged (MASMTGGQQMG) fusion proteins **Form:** Lyophilized powder. Reconstitution with 0.5 ml of water results in a solution of 0.01 M sodium phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 0.01% thimerosal	• Western Blotting **Working Dilution:** • 1:1000 on 250-500 ng of purified T7-tagged fusion protein
HSV				
H 4640	4 mg 25 mg	HSV Peptide	**Sequence:** N-Lys-Gln-Pro-Glu-Leu-Ala-Pro-Glu-Asp-Pro-Glu-Asp-C **MW:** 1367.4 HSV Tag Peptide is a synthetic peptide corresponding to amino acids 290-300 of glycoprotein D of herpes simplex virus types I and II, with added N-terminal lysine. **Form:** Lyophilized powder	• Inhibition of antibody staining by HSV antibodies **Working Dilution:** 5-10 µg/ml for inhibition of antibody staining in Western blotting
H 6030	200 µg	Anti-HSV, Affinity Isolated Rabbit Antibody	**Specificity:** HSV-tagged fusion proteins **Form:** Solution in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 15 mM sodium azide.	• Western blotting • Immunoprecipitation **Working Dilution**: • 2.5 µg/ml by Western blotting
H 0912	0.2 ml	Anti HSV, peroxidase conjugate, developed in rabbit, IgG fraction of antiserum	**Specificity:** HSV-tagged (QPELAPEDPEA) fusion proteins **Form:** Solution in 0.01 M phosphate buffered saline, pH 7.4, containing 0.01% merthiolate as a preservative	• Western blotting **Working Dilution:** • 1:500-1:1000 on 100 ng of HSV-tagged fusion protein (chemiluminiscence).
V5				
A 7345	1 ml	Anti-V5 Agarose Affinity Gel	**Specificity:** V5-tagged (GKPIPNPLLGLDST) fusion proteins. **Binding Capacity:** 2.5 nmoles of V5-fusion protein per 1 ml. **Form:** 50% (v/v) Suspension in 0.01 M phosphate buffered saline, containing 15 mM sodium azide. Developed using a synthetic peptide corresponding to amino acids 95-108 of the P/V proteins of paramyxovirus SV5, conjugated to KLH.	• Immunoaffinity purification • Immunoprecipitation
V 7754	4 mg 25 mg	V5 Peptide	V5 Peptide is a synthetic peptide corresponding to amino acids 95-108 of non-structural protein V and to RNA polymerase α subunit (P protein), of paramyxovirus SV5 with an N-terminal cysteine. **Sequence:** N-Cys-Gly-Lys-Pro-Ile-Pro-Asn-Pro-Leu-Leu-Gly-Leu-Asp-Ser-Thr-C **MW:** 1524.8 **Form:** Lyophilized powder	• Inhibition of antibody staining by Anti-V5-Tag antibodies **Working Dilution:** 5-10 µg/ml for inhibition of antibody staining in Western blotting

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V 8012	50 µg	Monoclonal Anti-V5 Clone V5-10	**Specificity:** V5 tagged (GKPIPNPLLGLDST) fusion proteins expressed in transfected mammalian cells or produced by *in vitro* translation. **Form:** Supplied at approximately 1 mg/ml in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 15 mM sodium azide. Developed using a synthetic peptide corresponding to amino acid residues (95-108) of the P/V proteins of the paramyxovirus SV5, conjugated to KLH.	• Western blotting • Immunocytochemistry • ELISA **Working Dilution:** • 0.5-1 µg/ml by Western blotting • 1-2 µg/ml by immuno-cytochemistry on trans-fected mammalian cells fixed with methanol:acetone
V 8137	0.2 mg	Anti-V5, IgG Fraction of Rabbit Antiserum	**Specificity:** V5-tagged (GKPIPNPLLGLDST) fusion proteins. **Form:** Solution in 0.01M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide Developed in rabbit using a synthetic peptide corresponding to amino acids 95-108 of the P/V proteins of Paramyxovirus SV5, conjugated to KLH.	• Western blotting • Immunoprecipitation • Immunocytochemistry **Working Dilution:** • 2.5 µg/ml by Western blotting using a V5 tagged fusion protein
V 2260	1 vl	Monoclonal Anti-V5 Clone V5-10, Peroxidase Conjugate	**Specificity:** V5-tagged (GKPIPNPLLGLDST) fusion proteins. **Form:** Lyophilized powder Reconstitution with 0.5 ml of water results in a solution of 0.01 M sodium phosphate buffered saline containing 1% BSA and 0.01% thimerosal.	• Western blotting **Working Dilution:** • 1:4,000-8,000 by Western blotting

GST

E 2404	1 ml 5 x 1 ml	EZview™ Red Glutatione Affinity Gel	**Specificity:** Protein containing Glutathione binding sequences **Form:** Suspension of red colored beaded agarose in phosphate buffered saline containing 50% glycerol and 0.0015% Kathon® CG/IPCII as an antimicrobial preservative	• Small scale affinity capture
G 1919	2 x 1 ml 5 x 1 ml	Glutathione Magnetic Agarose Beads	**Specificity:** Protein containing Glutathione binding sequences **Form:** Glutathione conjugated to beaded magnetic agarose	• Automated and small-scale affinity capture purifications
G 3294	1 each 5 each	Glutathione HC Plates	**Specificity:** Protein containing Glutathione binding sequences **Coating:** Proprietary high densitiy coating of glutathione up to 200 microliters per well **Binding Capacity:** greater than 2 micrograms of protein per well	• High throughput purification of protein for analysis by SDS-PAGE, MALDI-MS, and in-well protein assays Protein-Protein Interaction
G 7781	0.2 ml 0.5 ml	Anti-Glutathione-S-Transferase, IgG Fraction of Rabbit Antiserum	**Specificity:** Recognizes native and denatured-reduced forms of purified GST or GST fusion proteins. Specific for GS from *Schistosoma japonicum,* and does not recognize GST from rat, rabbit, porcine or bovine liver, or from human placenta when tested by ELISA. **Form:** Solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.	• Western blotting • Dot blotting • ELISA **Working Dilution**: • 1:2,000 by Western blotting (colorimetric) using purified recombinant GST or lysates of induced *E. coli* expressing GST fusion proteins
G 6400	250 µg	Glutathione-Peroxidase Conjugate	**Specificity:** Detects glutathione-S-transferase (GST) tagged fusion proteins. **Form:** Lyophilized powder with 250 µg peroxidase/vial and is approx. 40% protein (peroxidase and BSA); balance is buffer salts and carbohydrate.	• Enzyme Linked Assay (ELA) • Dot blotting Not suitable for protein blots due to denaturation of the GST enzyme during electrophoresis. Detects less than 150 ng of GST-tagged fusion protein in ELA

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A 5838	0.5 ml	Anti-Glutathione-S-Transferase, IgG Fraction of Rabbit Antiserum, Alkaline Phosphatase Conjugate	**Specificity:** Recognizes native and denatured-reduced forms of purified GST or GST fusion proteins. Specific for GST from *Schistosoma japonicum*, and does not recognize GST from rat, rabbit, porcine or bovine liver, or from human placenta when tested by ELISA. **Form:** Rabbit IgG fraction of antiserum supplied in 0.05 M Tris buffer, pH 8.0, containing 1 mM $MgCl_2$, 1% BSA, and 15 mM sodium azide.	• Western blotting • Dot blotting • ELISA **Working Dilution:** • 1:2,000 by Western blotting (colorimetric) using lysates of *E. coli* induced to express recombinant GST
A 7340	0.5 ml	Anti-Glutathione-S-Transferase, IgG Fraction of Rabbit Antiserum, Peroxidase Conjugate	**Specificity:** Recognizes native and denatured-reduced forms of purified GST or GST fusion proteins. Specific for GST from *Schistosoma japonicum*, and does not recognize GST from rat, rabbit, porcine or bovine liver, or from human placenta when tested by ELISA. **Form:** The product is supplied as IgG fraction of rabbit antiserum in 0.01 M phosphate buffered saline, pH 7.4, containing 0.01% thimerosal.	• Western blotting • Dot blotting • ELISA **Working Dilution:** • 1:1,000 by Western blotting (colorimetric) using lysates of *E. coli* induced to express recombinant GST

Maltose Binding Protein (MBP)

M 6295	0.2 ml 0.5 ml	Monoclonal Anti-Maltose Binding Protein, Clone MBP-17	**Specificity:** Non-reduced and denatured-reduced forms of purified MBP or MBP fusion proteins. **Form:** Mouse ascites fluid with 15 mM sodium azide as a preservative.	• Western blotting • Dot blotting • ELISA **Working Dilution:** • 1:4,000 by Western blotting (colorimetric) using purified, recombinant MBP
A 3963	0.5 ml	Monoclonal Anti-Maltose Binding Protein, Clone MBP-17, Alkaline Phosphatase Conjugate	**Specificity:** Non-reduced and denatured-reduced forms of purified MBP or MBP fusion proteins. **Form:** Purified mouse antibody in 0.05 M Tris buffer, containing 1% bovine serum albumin, 50% glycerol, and 15 mM sodium azide.	• Western blotting • Dot blotting • ELISA **Working Dilution:** • 1:400 by Western blotting (colorimetric) using purified, recombinant MBP
A 4213	1 vl	Monoclonal Anti-Maltose Binding Protein, Clone MBP-17, Peroxidase Conjugate	**Specificity:** Non-reduced and denatured-reduced forms of purified MBP or MBP fusion proteins. **Form:** The antibody conjugate is provided as a lyophilized powder and should be reconstituted with 0.5 ml of water.	• Western blotting • Dot blotting • ELISA **Working Dilution:** • 1:1,000 by Western blotting (colorimetric) using purified, recombinant MBP

Cellulose Binding Domain (CBD)

C 5473	0.2 ml	Monoclonal Anti-Cellulose Binding Domain (CBD_{clos}), Clone CBD-8	**Specificity:** CBD_{clos} (CBD family IIIa, from *Clostridium cellulovorans,* 17 kDa). **Form:** Ascites fluid with 15 mM sodium azide as a preservative.	• Western blotting **Working Dilution:** • 1:20,000 by Western blotting using a recombinant 17 kDa fragment of the cellulose complex from *Clostridium cellulovorans*

VSV-G

A 1970	1 ml	Anti-VSV-G Agarose Affinity Gel	**Specificity:** VSV-G tagged fusion proteins **Binding Capacity:** At least 15 nmoles of VSV-G tagged fusion protein per ml of settled resin. **Elution:** At least 5 nmoles of a VSV-G tagged fusion protein per ml of settled resin, as determined using VSV-G tagged fusion protein of 120 kDa and low pH elution buffer. **Form:** 50% (v/v) Suspension in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.	• Immunoprecipitation • Immunoaffinity purification

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Product Number	Package Size	Description	Characteristics	Applications
V 7887	4 mg 25 mg	VSV-G Peptide	VSV-G Peptide is a synthetic peptide corresponding to the C-terminal of *Vesicular stomatitis* virus-glycoprotein. **Sequence:** N-Tyr-Thr-Asp-Ile-Glu-Met-Asn-Arg-Leu-Gly-Lys-C **MW:** 1339.5 **Form:** Lyophilized powder	• Inhibition of antibody staining by VSV-G antibodies **Titer:** 10-15 µg/ml for inhibition of antibody staining in Western blotting
V 5507	0.2 ml 0.5 ml	Monoclonal Anti-VSV Glycoprotein, Clone P5D4	**Specificity:** The antibody recognizes an epitope containing the five carboxy-terminal amino acids of *Vesicular stomatitis* virus glycoprotein (VSV-G). In infected cells, the antibody localizes the immature forms of VSV-G in the rough endoplasmic reticulum (RER) and in the cisternae of Golgi complex, as well as mature VSV-G at the cell surface and in the budding virus. The antibody does not stain the secreted form of VSV-G that lacks the membrane and the cytoplasmic domain. It recognizes native as well as denatured forms of VSV-G tagged proteins. **Form:** Provided as mouse ascites fluid with 15 mM sodium azide as a preservative.	• Western blotting • Immunoprecipitation • Immunocytochemistry • Immunoelectron microscopy **Working Dilution:** • 1:1,000 by Western blotting (colorimetric) using whole cell extracts expressing VSV-G tagged fusion protein
V 4888	0.2 mg	Anti VSV-G, Affinity Isolated Rabbit Antibody	**Specificity:** N-terminal or C-terminal VSV-G tag **Form:** Affinity isolated antibody at approximately 1.0 mg/ml in solution in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 15 mM sodium azide.	• Western blotting • Immunoprecipitation • Immunofluorescence **Working concentration:** • Minimum 0.5 µg/ml by immunoblotting or immunoprecipitation of recombinant VSV-G-tagged fusion proteins • Minimum 1.0 µg/ml by immunofluorescence
A 5977	1 vl	Monoclonal anti VSV-G, Peroxidase conjugate, clone P5D4	**Specificity:** The antibody recognizes an epitope containing the five carboxy-terminal amino acids of *Vesicular stomatitis* virus glycoprotein (VSV-G). Recognizes native as denatured forms of VSV-G tagged proteins **Form:** The product is supplied as a lyophilized powder. Reconstitution with 0.5 ml of water results in a solution of 0.01 M sodium phosphate buffered saline pH 7.4, containing 1% BSA and 0.01% thimerosal	• Western blotting **Working Dilution:** • 1:1000 on 20-50 ng of a purified VSV-G tagged fusion protein (chemiluminiscence)
C 7706	0.2 ml 0.5 ml	Monoclonal Anti-VSV Glycoprotein, Clone P5D4, Cy3 Conjugate	**Specificity:** See details for this clone in the description for V 5507. **Form:** Solution in 0.01 M phosphate buffered saline, pH 7.4, containing 1% BSA and 15 mM sodium azide.	• Immunocytochemistry **Working Dilution:** • 1:10,000 by direct immunofluorescence using COS-7 cells transfected with a VSV-G tagged vinculin construct

Thioredoxin

A 2582	1 ml	Anti-Thioredoxin Agarose Conjugate, IgG Fraction of Rabbit Antiserum	**Specificity:** The antibody is specific for natural *Escherichia coli* and recombinant thioredoxin. **Binding Capacity:** Binds a minimum of 0.4 mg of thioredoxin per ml of settled resin. **Form:** 50% (v/v) Suspension in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.	• Immunoaffinity purification • Immunoprecipitation
T 0803	0.2 ml 0.5 ml	Anti-Thioredoxin, IgG Fraction of Rabbit Antiserum	**Specificity:** The antibody is specific for natural *Escherichia coli* and recombinant thioredoxin. It may be used to identify the expression of thioredoxin fusion proteins. **Form:** Solution supplied in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.	• Western blotting • Dot blotting **Working Dilution:** • 1:5,000 by dot blotting using purified recombinant thioredoxin • 1:5,000 by Western blotting (colorimetric) using *E. coli* extract

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β-Galactosidase				
G 4644	1 vl	Anti-β-Galactosidase, Developed in Mouse, Fractionated Antiserum	**Specificity:** Developed against purified β-galactosidase from *E. coli.* The antibody may be used to detect β-galactosidase expression by the *lac*Z reporter gene in P-element enhancer lines in Drosophila. **Form:** Lyophilized from 0.01 M phosphate buffered saline, pH 7.2. Reconstitute with 2 ml of water.	• Western blotting **Working Dilution:** • 1:1,000 by Western blotting (colorimetric) using non-reduced β-galactosidase
G 6282	0.2 ml 0.5 ml	Monoclonal Anti-β-Galactosidase, Clone GAL-40, Mouse IgM	**Specificity:** Developed against purified β-galactosidase from *E. coli.* The antibody may be used for detection of β-galactosidase expressed by the *E. coli lac*Z gene encoded in many cloned gene sequences; serves as an indicator for fusion proteins encoded by an inserted DNA sequence. **Form:** Mouse ascites fluid with 15 mM sodium azide as a preservative.	• Western blotting • Dot blotting • Immunocytochemistry **Working Dilution:** • 1:1,000 by Western blotting (colorimetric) using denatured-reduced *E. coli* β-galactosidase
B 0271	0.2 ml 0.5 ml	Monoclonal Anti-β-Galactosidase, Clone GAL-13, Mouse IgG1, Biotin Conjugate	**Specificity:** Developed against purified β-galactosidase from *E. coli.* This antibody reacts with soluble β-galactosidase without causing loss of enzymatic activity. It is **not** recommended for Western blotting; it does not recognize denatured or reduced β-galactosidase. **Form:** The conjugate is supplied as a liquid in 0.01 M phosphate buffered saline, pH 7.4, containing 1% BSA with 15 mM sodium azide as a preservative.	• ELISA. The antibody may be used for amplification in immunoenzymatic staining by preparing a β-galactosidase anti-β-galactosidase (BGABG) soluble complex • Dot blotting on native purified or crude galactosidase **Working Dilution:** • 1:2,000 by dot blotting
G 8021	0.2 ml 0.5 ml	Monoclonal Anti-β-Galactosidase, Clone GAL-13, Mouse IgG1	**Specificity:** Developed against purified β-galactosidase from *E. coli.* This antibody reacts with soluble β-galactosidase without causing loss of enzymatic activity. It is **not** recommended for Western blotting; it does not recognize denatured or reduced β-galactosidase. **Form:** Mouse ascites fluid with 15 mM sodium azide as a preservative.	• Immunocytochemistry • ELISA • Dot blotting **Working Dilution:** • 1:2,000 by indirect ELISA using mouse primary antibody, bridging antibody and *E. coli* β-galactosidase
Alkaline Phosphatase				
A 2951	0.2 ml 0.5 ml	Monoclonal Anti-Human Placental Alkaline Phosphatase, Clone 8B6	**Specificity:** In SDS gels, the product reacts with both Regan and Nagao isozymes of human placental alkaline phosphatase (hPLAP, 130 kDa, 67/130 kDa). By RIA, the antibody binds to hPLAP with an affinity constant of 5×10^9 m^{-1}. It does not react with PLAP-like enzymes. **Form:** Mouse ascites fluid with 15 mM sodium azide as a preservative.	• Immunohistochemistry (frozen sections) • Immunocytochemistry • RIA • ELISA • Western blotting **Working Dilution:** • 1:4,000 by immunohistochemistry (formalin-fixed, paraffin-embedded sections) using human placenta
A 2080	1 ml	Monoclonal Anti-Alkaline Phosphatase, Human Placental, Agarose, Clone 8B6	**Specificity:** In SDS gels, the antibody reacts with both Regan and Nagao isozymes of human placental alkaline phosphatase (hPLAP, 130 kDa, 67/130 kDa). By RIA, the antibody binds to hPLAP with an affinity constant of 5×10^9 m^{-1}. It does not react with PLAP-like enzymes. **Form:** 50% (v/v) Suspension in 0.1 M phosphate buffered saline, pH 7.4 containing 15 mM sodium azide. The purified immunoglobulin is immobilized on agarose, at 2 mg antibody per ml bed volume.	• Immunoprecipitation • Immunoaffinity purification
Green Fluorescent Protein (GFP)				
G 6539	0.2 ml 0.5 ml	Monoclonal Anti-Green Fluorescent, Clone GFP-20	**Specificity:** The antibody was developed using a GFP-tagged fusion protein. The antibody reacts with fusion proteins expressed by prokaryotic expression vectors. **Form:** Mouse ascites fluid with 15 mM sodium azide as a preservative.	• Western blotting • Dot blotting • ELISA **Working Dilution:** • 1:2,000 by Western blotting (colorimetric)

DETECTION AND PURIFICATION

Product Number	Package Size	Description	Characteristics	Applications
G 1544	100 µg	Anti GFP (N-ter), developed in rabbit, affinity isolated antibody	**Specificity:** GFP fusion proteins. The epitope resides within amino acids 3-17 of the Green Fluorescent Protein **Form:** Solution of affinity isolated antibody at approximately 1.0 mg/ml in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 15 mM sodium azide as a preservative	• Western blotting • Immunoprecipitation **Working Dilution:** • 0.25-0.5 µg/ml by Western blotting of GFP fusion proteins expressed in mammalian cell extracts (chemiluminiscence) • 1.0-2.5 µg by Immunoprecipitation using a GFP fusion protein from transfected mammalian cell lysates

Protein A, G

P 6486	1 ml 5 x 1 ml	EZview™ Red Protein A Affinity Gel	**Specificity:** Fc portion of the IgG antibodies. **Form:** Suspension of red colored beaded agarose in phosphate buffered saline containing 50% glycerol and 0.0015% Kathon® CG/IPCII as an antimicrobial preservative.	• Immunoprecipitation
S 1938	1 each 5 each	Protein A Coated HS 96-Well Plates	**Specificity:** Fc portion of IgG antibodies. **Coating:** Recombinant protein A from *Staphylococcus aureus,* expressed in *E coli,* is coated using 200 µl/well. **Blocking Agent:** Proprietary blocking agent at 300 µl/well, both reduces background and improves stability.	• Protein-Protein interactions • ELISA • High throughput immunoaffinity
E 3403	1 ml 5 x 1 ml	EZview™ Red Protein G Affinity Gel	**Specificity:** Fc portion of the IgG antibodies **Capacity:** Human IgG ≥8 mg/ml **Form:** Suspension of red colored beaded agarose in phosphate buffered saline containing 50% glycerol and 0.0015% Kathon® CG/IPCII as an antimicrobial preservative.	. • Immunoprecipitation
S 2063	1 each 5 each	Protein G Coated HS 96-Well Plates (high sensitivity)	**Specificity:** Fc portion of the IgG antibodies. **Coating:** Recombinant Protein G from *Streptococcus sp.,* expressed in *E. coli,* is coated using 200 µl/well. **Blocking Agent:** Proprietary blocking agent at 300 µl/well, both reduces background and improves stability.	• High throughput immunoaffinity purification of FLAG fusion proteins • ELISA • Protein-Protein interactions

Streptavidin *(Please see the Sigma catalog for a complete listing)*

E 5529	1 ml 5 x 1 ml	EZview™ Red Streptavidin Affinity Gel	**Specificity:** Biotinylated compounds **Form:** Suspension of red colored beaded agarose in phosphate buffered saline containing 50% glycerol and 0.0015% Kathon® CG/IPCII as an antimicrobial preservative.	• Small scale affinity capture
S 6940	1 ea 5 ea	SigmaScreen™ Streptavidin HC Coated Plates	**Specificity:** Biotinylated compounds. **Capacity:** ≥300 pmol biotin/well. **Note:** Proprietary high density coating.	• Protein-Protein interactions • High throughput immuno-affinity purification
M 5432	5 ea	SigmaScreen™ Streptavidin 96-Well Clear Plates	**Specificity:** Biotinylated compounds. **Sensitivity:** ≤1 ng/well biotinylated compound **Blocking Agent:** Proprietary blocking agent, at 200 µl/well, both reduces background and improves stability.	• Protein-Protein interactions • ELISA • High throughput immunoaffinity
BK200	1 kt	Biotinylation Kit, Cleavable	Complete kit for biotinylation of proteins containing buffers, biotinylation gel filtration reducing agent, and affinity resin. Allows for removal of biotin moiety due to cleavable linker, facilitating recovery of protein after affinity capture on avidin/streptavidin support.	• Components sufficient for minimum 200 mg of protein
S 2890	0.25 mg 1 mg	Streptavidin-Alkaline Phosphatase Conjugate	**Specificity:** Biotinylated compounds. **Note:** Optimal working dilution should be determined emperically by trying a range of dilutions. **Form:** Lyophilized powder	• Western blotting • ELISA • Immunocytochemistry • Immunohistochemistry

DETECTION AND PURIFICATION

Product Number	Package Size	Description	Characteristics	Applications
S 2438	0.25 mg	Streptavidin-Peroxidase Polymer, Ultrasensitive	**Specificity:** Biotinylated compounds. **Note:** Multiple active biomolecules on each polymer chain increase the biotin binding capacity and amplify the peroxidase enzyme signal. Recommended use of 5 µg/ml.	• Western blotting • ELISA • Immunocytochemistry • Immunohistochemistry
S 3762	0.1 mg 0.5 mg 1 mg	Streptavidin-FITC Conjugate	**Specificity:** Biotinylated compounds. **Form:** The product is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing compounds 1% BSA and 15 mM sodium azide.	• Fluorescent detection of biotinylated
S 6402	1 ml	Streptavidin-Cy3 Conjugate	**Specificity:** Biotinylated compounds. **Form:** Optimal working dilution should be determined emperically by trying a range of dilutions from a 1 mg/ml stock in buffer.	• Fluorescent Immunohisto-chemistry • Fluorescent Immunocyto-chemistry • Flow cytometry

Two Hybrid System

G 3042	0.2 mg	Anti-GAL4 DNA-BD (Binding Domain), Affinity Isolated Antibody produced in rabbit	**Specificity:** Recombinant GAL4 DNA-BD **Form:** Solution of affinity isolated antibody at approximately 0.8 mg/ml in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 15 mM sodium azide.	• Western blotting **Working Dilution:** Minimum 2.5 µg/ml by immunoblotting of GAL4 DNA-BD fusion protein in *S. cerevisiae* extract
G 9293	0.2 ml	Anti GAL4 (Activation domain), Affinity Isolated Antibody produced in rabbit	**Specificity:** GAL4 DNA activation domain fusion proteins **Form:** Solution in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumine and 15 mM sodium azide as a preservative	• Western blotting (chemiluminiscence) **Working Dilution:** • 0.5 µg/ml on *S. cerevisiae* extracts expressing GAL4-AD fusion proteins
V 4388	0.2 ml	Anti-VP16, IgG Fraction of Antiserum	**Specificity:** Amino acids 463-476 of VP16 **Form:** IgG fraction of rabbit antiserum provided as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.	• Immunoprecipitation • Immunoblotting **Working Dilution:** • Minimum dilution of 1:1000 by immunoblotting of transfected mammalian extracts expressing recom-binant VP16-tagged fusion protein • Minimum dilution of 1:1000 by immunoprecipitation of trans-fected mammalian extracts expressing recombinant VP16-tagged fusion protein
B 9808	0.2 mg	Anti-B42 antibody produced in rabbit	**Specificity:** B42 tagged fusion proteins **Form:** Solution in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 15 mM sodium azide as a preservative	• Indirect immunoblotting (chemiluminescent) **Working Dilution:** • 0.5-1.0 µg/ml using 25 ng of purified recombinant B42 fusion protein
L 0415	100 µg	Anti-Lex A antibody produced in rabbit	**Specificity:** Lex A tagged fusion proteins **Form:** Solution in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 15 mM sodium azide as a preservative	• Indirect immunoblotting (chemiluminescent) **Working Dilution:** • 1 µg/ml using Extracts of Galactose-induced *Saccharomyces cerevisiae* expressing Lex A from GAL1 promoter

DETECTION AND PURIFICATION

Miscellaneous

Product Number	Package Size	Description	Characteristics	Applications
B 7786	0.2 ml 0.5 ml	Anti-fd Bacteriophage, IgG Fraction of Rabbit Antiserum	**Specificity:** The antibody binds specifically to phage coat proteins of fd phage or M13 phage and thus may act as a capture antibody when coated directly on multiwell plates or as a primary detection antibody for specifically captured fd or M13 phage. **Form:** IgG fraction of rabbit antiserum supplied in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.	• ELISA • May be useful in sorting large phage display libraries (antibody, peptide, etc.) with the expressed proteins fused to either the gene III or to the gene VIII protein of the filamentous phage **Working Dilution:** • 1:1,000-1:8,000 by Indirect ELISA using 5 x 10^7 phage/ml or 5 x 10^{10} phage/ml, respectively
B 2661	0.5 ml	Anti-fd Bacteriophage-Biotin Conjugate, Rabbit, IgG Fraction of Antiserum	**Specificity:** The antibody binds specifically to phage coat proteins of fd phage or M13 phage and thus may act as a capture antibody when coated directly on multiwell plates or as a primary detection antibody for specifically captured fd or M13 phage. **Form:** IgG fraction of rabbit antiserum at approximately 3.5 mg/ml in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as preservative.	• ELISA • May be useful in rapidly sorting large phage display libraries (antibody, peptide, etc.) with the expressed proteins fused to either the gene III or to the gene VIII protein of the filamenttous phage. It may be used as a reagent in ''phage ELISA" offering sensitive and specific activity for the detection of recombinant phage **Working Dilution:** • 1:500-1:1,000 by indirect ELISA using 10^{10}-10^{11} phage/ml coated wells
C 9336	0.5 ml	Anti-Chloramphenicol Acetyl Transferase (CAT), Rabbit, IgG Fraction of Antiserum	**Specificity:** Developed against a bacterial chloramphenicol acetyltransferase (CAT). The antibody identifies recombinant CAT as a predominant band of 26 kDa in eukaryotic cells transfected with a plasmid bearing the CAT gene. **Antigen MW:** 26 kDa **Form:** IgG fraction of rabbit antiserum supplied in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.	• Western blotting • Immunocytochemistry **Working Dilution:** • 10 µg/ml by Western blotting (colorimetric) • 10 µg/ml by indirect immunofluorescence
L 2164	0.2 ml	Monoclonal Anti-Luciferase	**Specificity:** Monoclonal Anti-Luciferase recognizes recombinant luciferase in transfected eukaryotic cells. **Form:** Purified immunoglobulin (IgG1) at approximately 2.0 mg/ml in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.	• Western blotting • Immunocytochemistry **Working Dilution:** • 2-4 µg/ml by immunoblotting using whole extracts of transfected 293T cells expressing luciferase • 20-40 µg/ml by immunocytochemistry using methanol-acetone fixation of transfected 293T cells expressing luciferase.
L 0159	0.5 ml	Anti-Luciferase, Firefly, Rabbit, IgG Fraction of Antiserum	**Specificity:** Anti-Luciferase is developed in rabbits using firefly *(Photinus pyralis)* luciferase as immunogen. **Form:** IgG fraction of antiserum supplied in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.	• Immunocytochemistry **Working Dilution:** • 10 µg/ml by indirect immunofluorescence using eukaryotic cells transfected with a plasmid bearing the luciferase gene

DETECTION AND PURIFICATION

Product Number	Package Size	Description	Characteristics	Applications
C 7988	200 µg	Monoclonal anti Cre, Clone 7-23, Purified immunoglobulin	**Specificity:** Cre-recombinase protein (approx. 38 kDa). The antibody epitope resides within the most carboxy terminal 29 amino acids of the protein **Form:** Purified immunoglobulin solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative	• Western blotting • immunoprecipitation • immunohistochemistry • immunocytochemistry • flow cytometry **Working Dilution:** • 0.5-1.0 µg/ml by Western blotting on recombinant Cre recombinase
D 0942	100 µg	Anti DHFR (C-ter), developed in rabbit, affinity isolated antibody	**Specificity:** DHFR and DHFR fusion proteins. The epitope resides within amino acids 171-185 of mouse DHFR. **Form:** Solution of affinity isolated antibody at approximately 1.0 mg/ml in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 15 mM sodium azide as a preservative	• Western blotting • Immunoprecipitation **Working Dilution:** • 0.5-1.0 µg/ml by Western blotting on 50-100 ng of purified recombinant DHFR (chemiluminiscence). • 0.5-1.0 µg by immunoprecipitation using 100-200 ng of purified DHFR
D 1067	100 µg	Anti DHFR (N-ter), developed in rabbit, affinity isolated antibody	**Specificity:** DHFR and DHFR fusion proteins. The epitope resides within amino acids 27-40 of mouse DHFR **Form:** Solution of affinity isolated antibody at approximately 1.0 mg/ml in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 15 mM sodium azide as a preservative	• Western Blotting • Immunoprecipitation **Working Dilution:** • 0.5-1.0 µg/ml by Western blotting on 100 ng of purified recombinant DHFR (chemiluminiscence). • 0.5-1.0 µg by immunoprecipitation using 100-200 ng of purified DHFR