



Bioclone Australia Pty Limited

Antibody Catalogue

Bioclone has a large range of monoclonal and polyclonal antibodies.

The monoclonal antibodies are available as either ascites fluid or purified antibody in amounts from 1mg. The polyclonal antibodies are available as whole serum or purified antibody. Technical data sheets are available for all antibodies. Bioclone has validated antibody pairs (monoclonal/monoclonal) and (monoclonal/polyclonal) for immunoassay development, with full technical data on performance characteristics.

Bioclone also manufactures a range of ELISA accessory products, such as the streptavidin-peroxidase development kit, for making immunoassay development easier.

To ORDER or for Technical Support :

Telephone: +61 (0) 2 9517 1966

Facsimile: +61 (0) 2 9517 2990

E-mail: sales@bioclone.com.au

Form:ABC Ed12

Bioclone's Quality Management System certified to ISO 9001, ISO 13485, GMP and CE Mark

Bioclone Australia Pty Limited (a subsidiary of Hitachi Chemical Co., Ltd) ABN 14 002 036 071
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International Product List:

Bioclone also markets a large range of immunoassay kits - IRMAs, RIAs, ELISAs, and allergen products.

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Technical Data Sheet:

Monoclonal Anti-Bromodeoxyuridine (BrdU) Antiserum

Catalogue#: A1-9452 A2-9452
Purified Antibody Ascites fluid

Description: Monoclonal antibody against BrUdR (same as BrdU; there is a variety of nomenclature in the literature). Available as either purified antibody buffered in 0.05M Tris Acetate buffer or as ascites fluid.
Contains preservatives, filtered to 0.2µm.

Background: BrUdR is an analogue of thymidine and can be incorporated specifically into DNA. Cells synthesising DNA will incorporate BrUdR into the DNA. Anti-BrUdR is used to detect cells undergoing DNA synthesis.

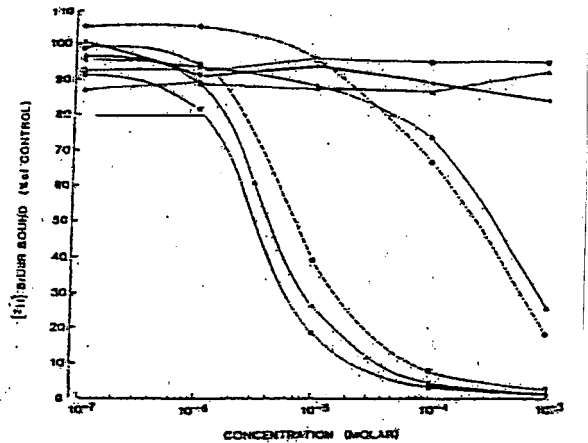
Clone#: 94/5 2E11 **Isotype:** IgG₁

Specificity: Binds to IUdR, BrUdR and BrUR. Binds with lower affinity to FUdR and TdR in solution and does not bind to CdR, AdR or GdR.

Binding Specificity:

IUdR
BrUdR
BrUR
FUdR
TdR
CdR
AdR
GdR

Figure reproduced with permission from:
deFazio A. Proliferation and mutation
analysis in mammalian cells. (1987)
Thesis, Department of Cancer Medicine
University of Sydney.



Usage: Suitable for fluorescence microscopy, flow cytometry and immunohistochemical analysis.

Storage: Refrigerate at 2-8°C for immediate use. Aliquot and freeze at -20°C for long term storage. Avoid repeated freezing and thawing cycles.

References:

1. deFazio A, Tattersall M, (1985) Rapid fluorometric detection of drug resistant tumour cells. Br. J. Cancer 52: 633-636.
2. deFazio A, Leary J, Hedley D, Tattersall, M (1987) Immunohistochemical detection of proliferating cells in vivo. J. Histochem. Cytochem. 35: 571-577.
3. deFazio A, Musgrove E, Tattersall, M (1988) Flow cytometric enumeration of drug resistant tumor cells. Cancer Res 48: 6037-6043.
4. deFazio A, Heneine N, Musgrove E, Tattersall, M (1989) Enumeration of 6-thioguanine resistant tumor cells using flow cytometry and comparison with a microtitration cloning assay. Mutation Res. 216: 57-64.

Precautions:

For research use only. Not for human or therapeutic use. Sodium azide yields highly toxic acid under acidic conditions. When disposing of reagents use copious amounts of water to prevent build-up of potentially explosive azides.

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Technical Data Sheet:

Monoclonal Antibodies to Human Chorionic Gonadotrophin (hCG) and subunits

Description: The following antibodies are available in two forms:

Purified Antibody or Ascites Fluid.

Monoclonal antibodies are available in quantities from 1mg.

Catalogue#		Type	Specificity	Affinity (mole ⁻¹)	Crossreactions (%)						
Purified	Ascites				βhCG	hCG	αhCG	LH	FSH	TSH	
<u>hCG</u>											
A1-899	A2-899	IgG ₁	hCG	9.1x10 ⁹	0.5	100	0.75	4.2	0	0	
A1-6722	A2-6722	IgG ₁	hCG	2.4x10 ¹¹	0	100	0	67	2.8	9.1	
<u>hCG</u> <u>βhCG</u>											
A1-261	A2-261	IgG ₁	hCG, βhCG	2.5x10 ¹⁰	2.7x10 ¹⁰	100	100	1.2	0.5	0.1	0
A1-204	A2-204	IgG ₁	hCG, βhCG	2x10 ¹⁰	9x10 ⁹	91	100	0	2.4	0.3	0.4
A1-815	A2-815	IgG ₁	hCG, βhCG	9x10 ⁹	5.8x10 ⁹	74	100	0	100	330	400
<u>βhCG</u>											
A1-019	A2-019	IgG ₁	βhCG	1.3x10 ¹⁰	100	2.3	0.76	0	0	0	
A1-3623	A2-3623	IgG ₁	βhCG	1.7x10 ⁸	100	<1.0	<1.0	<1.0	<1.0	<1.0	
A1-1010	A2-1010	IgG ₁	βhCG	5.0x10 ⁸	100	<1.0	<1.0	<1.0	<1.0	<1.0	
<u>αhCG</u>											
A1-635	A2-635	IgG ₁	αhCG	4.6x10 ¹⁰	<0.1	<0.1	100	0	1.1	0	

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Technical Data Sheet:

Monoclonal Antibodies to Human Liver Ferritin

Description: The following antibodies are available in two forms:

Purified Antibody or Ascites Fluid.

Monoclonal antibodies are available in quantities from 1mg.

Catalogue#		Specificity
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Purified	Ascites	Ferritin
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A1-4E2	A2-4E2	Liver
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Precautions:

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Technical Data Sheet:

Monoclonal Antibodies to Human Follicle Stimulating Hormone (FSH)

Description: The following antibodies are available in two forms:

Purified Antibody or Ascites Fluid.

Monoclonal antibodies are available in quantities from 1mg.

Catalogue#		Type	Specificity	Affinity (mole ⁻¹)		Crossreactions (%)					
Purified	Ascites			FSH	FSH	βFSH	αFSH	LH	TSH	hCG	
A1-7824	A2-7824	IgG ₁	FSH	3x10 ⁹		100	0	0	0	0	0
				<u>FSH</u>	<u>βFSH</u>						
A1-797	A2-797	IgG _{2b}	FSH, βFSH	7.2x10 ⁸	7x10 ⁷	100	60	0	0	0.6	0
A1-91191C	A2-91191C	IgG ₁	FSH, βFSH	1.1x10 ⁸	-	100	400	0	0	0	0
A1-9119A7	A2-9119A7	IgG ₁	FSH, βFSH	3.1x10 ⁹	8.3x10 ⁸	100	223	0	0	1.8	0
A1-953	A2-953	IgG ₁	FSH, βFSH	2x10 ⁹	2.6x10 ⁹	100	220	0	0	1.8	0
				<u>FSH</u>	<u>αFSH</u>						
A1-9212	A2-9212	IgG ₁	FSH, αFSH	4x10 ⁹	low	100	0	<3	12	18	8.5
					<u>αFSH</u>						
A1-8317	A2-8317	IgG ₁	αFSH		4.6x10 ¹¹	0	0	100	0	0	0
A1-662	A2-662	IgG ₁	αFSH		3.8x10 ¹¹	0	0	100	0	0	0

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Technical Data Sheet:

Monoclonal Antibodies to Growth Hormone (GH)

Description: The following antibodies are available in two forms:

Purified Antibody or Ascites Fluid.

Monoclonal antibodies are available in quantities from 1mg.

Catalogue#	Purified	Ascites	Type	Specificity	Affinity (mole ⁻¹)		Crossreactions (%)	
					hGH	hPL	hPrI	hPL
A1-1911B	A2-1911B	IgG ₁	GH	1x10 ⁹		1.4	1.6	
A1-1912C	A2-1912C	IgG ₁	GH & PL	4.1x10 ⁹	4.4x10 ⁹	2.4	100	
A1-3612	A2-3612	IgG ₁	GH	3.8x10 ⁹		2.3	0.001	
A1-549	A2-549	IgG ₁	GH	5.2x10 ⁹		2.5	0.001	
A1-746	A2-746	IgG ₁	GH & PL	4.4x10 ¹⁰	0.8x10 ⁹	2.2	3.1	
A1-772	A2-772	IgG ₁	GH & PL	8.9x10 ⁹	4.5x10 ⁹	2	100	

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Technical Data Sheet:

Monoclonal Antibodies to Hepatitis B Surface Antigen (HBsAg)

Description: The following antibodies are available in two forms:

Purified Antibody or Ascites Fluid.

Monoclonal antibodies are available in quantities from 1mg.

Catalogue#	Purified	Ascites	Type	Specificity* (HBsAg Phenotype)								
				ayW1	ayW2	ayW3	ayW4	ayr	adW2	adW4	adr	adWy
A1-H1		A2-H1	IgG	+++	-	++++	+	+	+++	++++	-	-
A1-H2		A2-H2	IgG	-	++++	+++	+	-	-	++++	+	++
A1-H3		A2-H3	IgM	-	++	++	-	-	++	+++	-	-
A1-H4		A2-H4	IgG	-	-	++++	+	+	+	++++	+	+++
A1-H5		A2-H5	IgA	++++	++++	++++	++	+	++++	++++	++++	++++

* From 2-dimensional gel immunodiffusion analysis of culture supernates from hybridomas secreting anti-HBsAg

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Technical Data Sheet:

Monoclonal Antibodies to Human Luteinising Hormone (LH)

Description: The following antibodies are available in two forms:

Purified Antibody or Ascites Fluid.

Monoclonal antibodies are available in quantities from 1mg.

Catalogue#	Purified	Ascites	Type	Specificity	Affinity (mole ⁻¹)		Crossreactions (%)							
					LH	β LH	LH	α LH	FSH	TSH	hCG			
					<u>LH</u>	<u>βLH</u>								
A1-3LH5B2	A2-3LH5B2	IgG ₁	LH, β LH	7.8x10 ⁸	5.6x10 ⁸	100	189	<<2.5	<2.5	7	11.1			
A1-3LH5B6	A2-3LH5B6	IgG	LH, β LH	8.5x10 ⁸	3x10 ⁸	100	208	<<2.5	<2.6	8.1	11.3			
					<u>LH</u>	<u>αLH</u>								
A1-4LH3A2	A2-4LH3A2	IgG ₁	LH, α LH	3.2x10 ⁸	1.1x10 ⁹	100	<<6	159	60	75	70			

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Technical Data Sheet:

Monoclonal Antibodies to Neurone Specific Enolase (NSE)

Description: The following antibodies are available in two forms:

Purified Antibody or Ascites Fluid.

Monoclonal antibodies are available in quantities from 1mg.

Catalogue#	Purified	Ascites	Type	Specificity	Species	Crossreactivity	Crossreactions (%)		
							$\gamma\gamma$ NSE	$\alpha\alpha$ NSE	$\beta\beta$ NSE
A1-F3	A2-F3	IgG ₁	γ Subunit NSE	Human Rat Bovine	100	0	0	0	

Other antibodies to NSE available.

USE IN IMMUNOCYTOCHEMISTRY

It has been demonstrated that this monoclonal antibody can be used on tissue that has been fixed with formalin and most other fixatives.

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Technical Data Sheet:

Monoclonal Antibodies to Human Prolactin (PRL)

Description: The following antibodies are available in two forms:

Purified Antibody or Ascites Fluid.

Monoclonal antibodies are available in quantities from 1mg.

Catalogue#	Purified	Ascites	Type	Specificity	Affinity (mole ⁻¹)	Crossreactions (%)	
						hGH	hPL
					<u>hPrl</u>		
A1-6111	A2-6111	IgG ₁	Prl	1.2x10 ¹⁰	0.003	0	
A1-5319	A2-5319	IgG ₁	Prl	1.8x10 ¹⁰	0	0	

Precautions:

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Technical Data Sheet:

Monoclonal Antibodies to Human Thyroid Stimulating Hormone (TSH)

Description: The following antibodies are available in two forms:

Purified Antibody or Ascites Fluid.

Monoclonal antibodies are available in quantities from 1mg.

Catalogue#	Purified	Ascites	Type	Specificity	Affinity (mole ⁻¹)		Crossreactions (%)					
					TSH	βTSH	TSH	βTSH	αTSH	LH	FSH	hCG
A1-075	A2-075	IgG _{2b}	TSH, βTSH	2.4x10 ⁸	3.6x10 ⁸	100	78	0	0	<9	0	
A1-1417	A2-1417	IgG _{2a}	TSH	8.5x10 ⁷		100	low	0	0	0	0	
A1-3423	A2-3423	IgG ₁	TSH, βTSH	3x10 ⁹	1.1x10 ⁹	100	880	0	<0.6	3.6	0	
A1-3619	A2-3619	IgG ₁	TSH, βTSH	4.2x10 ⁷	3.8x10 ¹⁰	100	5000	0	0	0	0	
A1-811	A2-811	IgG _{2a}	TSH	1x10 ⁹		100	0	0	0.3	1.8	1.6	

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Technical Data Sheet:

Polyclonal Rabbit Anti-Human β Endorphin Antiserum

Catalogue#: BEP01 (0.1mL - 250 RIA tubes)

Description: Lyophilised vial of rabbit whole antiserum against human β Endorphin.

Antibody#: BEP01

Specificity: Human β Endorphin

Crossreactivity:

h β LPH	100%
NAc β EP 131	100%
o- β EP	100%
r- β EP	37.5%
NAc (camel)	100%
β EP 1-27	0.26%
hACTH 1-39	0.16%
Met enk	0%
α -EP	0%
γ -EP	0%
hCRH	0%

Usage: This antibody has been used successfully in radioimmunoassay. It was diluted 1/150,000 to give 250 RIA tubes. The assay gave a sensitivity of 2 fmol/mL.

Storage: Refrigerate at 2-8⁰C for immediate use. After reconstitution, an appropriate antibacterial agent should be added for short term storage at 4⁰C. Aliquot and freeze at -20⁰C for long term storage. Avoid repeated freezing and thawing cycles.

Precautions:

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Technical Data Sheet:

Polyclonal Rabbit Anti-human Corticotrophin Releasing Hormone (CRH) Antiserum**Catalogue#:** CRH01 (250 RIA tubes)**Description:** Lyophilised vial of rabbit whole antiserum against human Corticotrophin Releasing Hormone (CRH).

Background: During human pregnancy, the placenta produces significant amounts of the neuropeptide corticotrophin releasing hormone (CRH) such that maternal plasma concentrations of the hormone rise throughout the third trimester. Whilst the biological function of CRH has not been determined, possible roles for the hormone include paracrine interactions within placental tissue and synergistic effects with oxytocin on myometrial contractility. It may have a role in the pathology of pre-eclampsia and may act directly as a trigger for parturition in humans. (1)**Antibody#:** CRH01**Specificity:** Human CRH, oCRH, N-terminal and mid-directed.**Crossreactivity:** AVP <0.005%
hACTH 1-39 <0.005%**Usage:** This antibody has been used successfully in radioimmunoassay at a dilution of 1/38,000 to give a final assay sensitivity of 10 fmol/mL.**Storage:** Refrigerate at 2-8⁰C for immediate use. After reconstitution, an appropriate antibacterial agent should be added for short term storage at 4⁰C. Aliquot and freeze at -20⁰C for long term storage. Avoid repeated freezing and thawing cycles.**References:**

1. McLean, M, Bisits, A, Davies, J, Woods, R, Lowry, P and Smith, R. A placental clock controlling the length of human pregnancy. Nature Medicine, Vol 1, 5 pp460-463 (1995).

Precautions:

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Technical Data Sheet:

Polyclonal Rabbit Anti-Adrenal Dopamine β -hydroxylase (DBH) Antiserum**Catalogue#:** DBH01 (1.0 mL)**Description:** Lyophilised vial of rabbit whole antiserum against Adrenal Dopamine β -hydroxylase (DBH).

Antibody#: DBH01**Immunogen:** Bovine Adrenal Dopamine β -hydroxylase (1)**Species Specificity:** Guinea Pig, Ovine, Porcine, Feline, Murine, Bovine, Canine and Human.**Usage:** Immunohistochemical detection of DBH in both fresh frozen and paraffin embedded tissue samples with indirect immunofluorescence and immunoperoxidase, with a dilution of 1:100 to 1:1000, at 4⁰C overnight.**Storage:** Refrigerate at 2-8⁰C for immediate use. After reconstitution, an appropriate antibacterial agent should be added for short term storage at 4⁰C. For extensive dilution, protein containing or other stabilising medium should be used. Aliquot and freeze at -20⁰C for long term storage. Avoid repeated freezing and thawing cycles.**References:**

1. Rush et al, , B.B.R.C. 57, pp 13071-1305, (1974)
2. Rush, RA, Dopamine β -hydroxylase (DBH) Immunohistochemistry and Immunocytochemistry. Chapter 6 from Immunohistochemistry. Ed AC Cuervo (1983) IBRO.

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Technical Data Sheet:

Polyclonal Goat Anti-Ferritin Antiserum

Catalogue#: FER01 (0.1mL)

Description: Vial of goat antiserum against human liver ferritin. Available as either purified antibody buffered in 0.05M Tris Acetate buffer, or as whole serum.
Contains preservatives, filtered to 0.2µm.

Background: Ferritin is the means by which higher organisms solubilise iron in the interior of cells. It is present in all cells, with the greatest concentration in liver, spleen and bone marrow.

Antibody#: SS-40

Specificity: Human Liver Ferritin 100%

Usage: This antibody has been used successfully in a 2-site immunoassay for human Ferritin, giving a sensitivity of < 0.5 µg/L.

Storage: Store at -20⁰C for immediate use. An appropriate antibacterial agent should be added for short term storage at 4⁰C. For extensive dilution, protein containing or other stabilising medium should be used. Aliquot and freeze at -20⁰C for long term storage. Avoid repeated freezing and thawing cycles.

Precautions:

For research use only. Not for human or therapeutic use. Sodium azide yields highly toxic acid under acidic conditions. When disposing of reagents use copious amounts of water to prevent build-up of potentially explosive azides.

For Technical Support: Telephone:+61 (0) 2 95171966 Facsimile:+61 (0) 2 95172990 E-mail: sales@bioclone.com.au



Technical Data Sheet:

Polyclonal Rabbit Anti-IGFBP-3 Antiserum

Catalogue#: IGF03 (10 µL)

Description: Vial of rabbit whole antiserum against Insulin-Like Growth Factor Binding Protein -3 (IGFBP-3).

Background: IGFBP-3 is useful in the diagnosis of acromegaly, and other growth disorders associated with lack of Growth Hormone. A total of 6 IGF binding proteins (IGFBPs) have been identified in human serum and other body fluids and tissues (1). It is a growth hormone dependent binding protein which carries most of the IGFs in serum. IGFBP-3 in human serum is the ~50kDa acid-stable subunit of a 150 kDa IGF-carrying complex. The functions of IGFBP-3 include the maintenance of a reservoir of IGFs in the circulation and regulation of IGF action. Like IGF-I, IGFBP-3 can be used to assess growth hormone status (2). It has been suggested that IGFBP-3 may be particularly useful in the diagnosis of growth hormone deficiency in children (3).

Immunogen: This antiserum was produced by immunisation of a rabbit with natural (glycosylated) human plasma IGFBP-3. The most active plasma obtained from consecutive bleeds of a single animal was pooled.

Antibody#: IGF03

Species Specificity: This antibody reacts with higher primate species (human, baboon etc).

Crossreactivity: The crossreactivity of this antibody is less than 1% with IGFBP-1, -2, and 6. (2).
IGF-I <0.01% Growth Hormone <0.01%

Usage:

1. This antibody has been used successfully in a radioimmunoassay of human serum for the quantitation of IGFBP-3. Recommended Dilution: 1 in 100,000 dilution.
2. Immunoblotting. Recommended Dilution: 1 in 5,000 dilution. (4).
3. Immunoprecipitation. Recommended Dilution : 0.5µL will precipitate at least 20ng IGFBP-3.

Storage: Store at -20°C until use. An appropriate antibacterial agent should be added for short term storage at 4°C. For extensive dilution, protein containing or other stabilising medium should be used. Aliquot and freeze at -20°C for long term storage. Avoid repeated freezing and thawing cycles.

References:

1. Martin, JL and Baxter, RC, (1992). Insulin-like Growth Factor Binding Protein-3: Biochemistry and Physiology. Growth Regulation, 2, 88-99.
2. Baxter, RC and Martin, JL (1986). Radioimmunoassay of Growth Hormone Dependent Insulin-like Growth Factor Binding protein in Human Plasma. J Clin Invest, 78, 1504-1512.
3. Blum, WF, Ranke, MB, Kietzman, K, Gauggel, E, Zeisel, HJ and Bierich, JR (1989). A Specific Radioimmunoassay for the Growth Hormone (GH)-Dependent Somatomedin-Binding Protein: Its Use for Diagnosis of GH Deficiency. J Clin Endocrinol and Metab, 70, 1292-1298.
4. Martin, et al. (1995) Endocrinology 136, 1219-1226.

Precautions:

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Technical Data Sheet:

2.5S Nerve Growth Factor Antigen

Catalogue#: NGF01 (100µg)

Description: Lyophilised vial of 2.5S Nerve Growth Factor (NGF)

Antigen#: NGF01

Source: Mouse submaxillary gland

Molecular Weight: 26,000 (dimer)

Purification: This antigen was prepared using the method of Mobley et al (1).

Purity: SDS polyacrylamide gel electrophoresis with Commasie Blue staining. 10µg gives a single band by Laemmli (2).

Preparation: Reconstitute with distilled or deionised water.

Usage: This antigen has been shown to promote survival and enhance neurite outgrowth of sympathetic nerve cells in an in vitro assay at 10ng/mL.

Storage: Refrigerate at 2-8⁰C for immediate use or at -70⁰C for long term storage. After reconstitution, an appropriate antibacterial agent should be added for short term storage at 4⁰C. Aliquot and freeze at -20⁰C for long term storage. Avoid repeated freezing and thawing cycles.

References:

1. Mobley, WC, Schenker, A, Shooter, EM. *Biochem* 15 25, (1976).
2. Laemmli, Uk, *Nature* 227, (1970)

Precautions:

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Technical Data Sheet:

Polyclonal Rabbit Anti-Nerve Growth Factor Antiserum

Catalogue#: NGF02 (250µL)

Description: Lyophilised vial of rabbit whole antiserum against Nerve Growth Factor (NGF)

Antibody#: NGF02

Produced In: Rabbit

Immunogen: Mouse salivary gland Nerve Growth Factor prepared by the modification of the methods of Mobley et al (1976) (1).

Specificity: Produces a single band on immunoelectrophores against 2.5S Nerve Growth Factor.

Usage: This antibody blocks the biological activity of Nerve Growth Factor, and will inhibit Nerve Growth Factor- induced neurite outgrowth from 8 day old chick embryo dorsal root ganglia (0.5µg/mL). Use in immunohistochemistry at dilutions of 1:1000 to 1:2000 for optimal staining of mouse submaxillary glands. Has been used successfully in ELISA at a titre in excess of 100,000.

Preparation: Reconstitute with distilled or deionised water.

Storage: Store at -20⁰C for immediate use. An appropriate antibacterial agent should be added for short term storage at 4⁰C. For extensive dilution, protein containing or other stabilising medium should be used. Aliquot and freeze at -20⁰C for long term storage. Avoid repeated freezing and thawing cycles.

References:

1. Mobley, WC, Schenker, A, Shooter, EM. *Biochem* 15 25, (1976).
2. Laemmli, Uk, *Nature* 227, (1970)

Precautions:

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Technical Data Sheet:

Polyclonal Sheep Anti-Nerve Growth Factor Antiserum

Catalogue#: NGF04 (250 μ L)

Description: Lyophilised vial of sheep whole antiserum against Nerve Growth Factor (NGF)

Antibody#: NGF04

Produced In: Sheep

Immunogen: Mouse salivary gland Nerve Growth factor prepared by the modification of the methods of Mobley et al (1976) (1).

Specificity: Produces a single band on immunoelectrophores against 2.5S Nerve Growth Factor.

Usage: This antibody blocks the biological activity of Nerve Growth Factor, and will inhibit Nerve Growth Factor- induced neurite outgrowth from 8 day old chick embryo dorsal root ganglia (0.5 μ g/mL). Use in immunohistochemistry at dilutions of 1:1000 to 1:2000 for optimal staining of mouse submaxillary glands. Has been used successfully in ELISA at a titre in excess of 100,000.

Preparation: Reconstitute with distilled or deionised water.

Storage: Refrigerate at 2-8 $^{\circ}$ C for immediate use. After reconstitution, an appropriate antibacterial agent should be added for short term storage at 4 $^{\circ}$ C. For extensive dilution, protein containing or other stabilising medium should be used. Aliquot and freeze at -20 $^{\circ}$ C for long term storage. Avoid repeated freezing and thawing cycles.

References:

1. Mobley, WC, Schenker, A, Shooter, EM. *Biochem* 15 25, (1976).
2. Laemmli, Uk, *Nature* 227, (1970)

Precautions:

For research use only. Not for human or therapeutic use. Sodium azide yields highly toxic acid under acidic conditions. When disposing of reagents use copious amounts of water to prevent build-up of potentially explosive azides.

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Technical Data Sheet:

Polyclonal Affinity Purified Sheep Anti-Nerve Growth Factor Antiserum**Catalogue#:** NGF05 (100µg)**Description:** Lyophilised vial of sheep affinity purified antiserum against Nerve Growth Factor (NGF)

Antibody#: NGF05**Produced In:** Sheep**Immunogen:** Mouse salivary gland Nerve Growth factor prepared by the modification of the methods of Mobley et al (1976) (1).**Specificity:** Produces a single band on immunoelectrophores against 2.5S Nerve Growth Factor.**Usage:** This antibody blocks the biological activity of Nerve Growth Factor, and will inhibit Nerve Growth Factor - induced neurite outgrowth from 8 day old chick embryo dorsal root ganglia (0.5µg/mL). Use in immunohistochemistry at concentrations of 2 µg/mL for optimal staining of mouse submaxillary glands. Has been used successfully in ELISA at a titre in excess of 100,000.**Preparation:** Reconstitute with distilled or deionised water.**Storage:** Refrigerate at 2-8⁰C for immediate use. After reconstitution, an appropriate antibacterial agent should be added for short term storage at 4⁰C. For extensive dilution, protein containing or other stabilising medium should be used. Aliquot and freeze at -20⁰C for long term storage. Avoid repeated freezing and thawing cycles.**References:**

1. Mobley, WC, Schenker, A, Shooter, EM. *Biochem* 15 25, (1976).
2. Laemmli, Uk, *Nature* 227, (1970)

Precautions:

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Technical Data Sheet:

Polyclonal Rabbit Anti-PNMT Antiserum

Catalogue#: PNMT01 (0.1mL)

Description: Lyophilised vial of rabbit whole antiserum against phenylethanoline-N-methyltransferase (PNMT), 0.01% (w/v) Sodium Azide.

Background: Phenylethanoline-N-methyltransferase (PNMT) is the final enzyme in the biosynthesis of catecholamines and a specific marker for cells containing adrenaline. The antisera can be used for the specific identification of cells which synthesise and store adrenaline in the nervous system as well as in the adrenal medulla. This antiserum was produced by immunisation of animals with partially purified bovine adrenal PNMT. Titres of antisera were assessed by inhibition of PNMT enzyme activity and by intensity of staining of PNMT-containing neurones in brain sections. The most active plasma obtained from consecutive bleeds of a single animal was pooled and lyophilised.

Antibody#: J3-8

Specificity: Human, Rat PNMT (does not react with rabbit PNMT)

Usage: This antibody has been used successfully for the immunohistochemical identification of PNMT. Optimal staining of sections of formaldehyde-fixed tissue for light microscopy have been obtained. Recommended Dilutions: 1,000 - 5,000 dilution for peroxidase staining, and 100 - 200 with fluorescein or rhodamine staining. Can be used for simultaneous double labelling experiments with species specific secondary antibodies. Suitable for detection of PNMT at the E.M. level.

Storage: Refrigerate at 2-8⁰C for immediate use. Aliquot and freeze at -20⁰C for long term storage. Avoid repeated freezing and thawing cycles.

References:

1. Howe, PRC, Costa, M, Furness, JB and Chalmers, JP (1980) Simultaneous demonstration of PNMT immunofluorescent and catecholamine fluorescent nerve cell bodies in the rat medulla oblongata. *Neuroscience* 5: p2229-2238.
2. Howe, PRC, Lovenberg, W, and Chalmers, JP (1981) Increased number PNMT-immunofluorescent nerve cell bodies in the medulla oblongata of stroke-prone hypertensive rats. *Brain Research* 205: p125-130.
3. Livett, BG, Day, R, Elde, RP and Howe, PRC (1982) Co-storage of enkephalins and adrenaline in the bovine adrenal medulla. *Neuroscience* 7: p1323-1332.
4. Howe, PRC, Rogers, PF and Blessing, WW (1984) Visualisation of Catecholamine-fluorescent nerve cell bodies in the rat brain after colchicine treatment. *Neuroscience Letters* 52:287-292.
5. Sawchenko, PE, Swanson, LW, Grzanna, R, Howe, PRC, Polak, JM and Bloom, SR (1985) Co-localisation of Neuropeptide-Y Immunoreactivity in brainstorm catecholaminergic neurones that project to the paraventricular nucleus of the hypothalamus. *J Comp Neurol* 241: p138-153.
6. Crofts, JN and Howe, PRC (1987) Limited depletion of central adrenaline stores following PNMT inhibition in rats. *Neurochem Int* 10: p347-353.
7. Levin, MC, Sawchenko, PE, Howe, PRC, Bloom, SR and Polak, JM (1987) The organisation of galanin-immunoreactive inputs to the paraventricular nucleus with special reference to their relationship to catecholaminergic afferents. *J Comp Neurol* 261: p 562-582.
8. Halliday, GM, Li, YW, Oliver, JR, Joh TH, Cotton RGH, Howe, PRC, Geffen, LB and Blessing, WW (1988). The distribution of neuropeptide-Y immunoreactive neurones in the human medulla oblongata. Colocalisation with monoamine-synthesising neurones. *Neuroscience* 26:p179-191.

Precautions:

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Technical Data Sheet:

Validated Antibody Pairs for 2-site Immunoassay Development

Description: The following antibody pairs for each analyte have been validated in an immunoassay which demonstrates specificity and sensitivity.

The following antibody pairs have been used in various technologies, and have demonstrated performance characteristics that can immediately progress your immunoassay development. Labelled antibodies are also available.

	Solid Phase Antibody:	Labelled Antibody:	Sensitivity:
α-Glycoprotein Subunit: Immunoradiometric assay	Cat#: A1-4LH3A2	Cat#: A1-635	< 0.03 IU/L
Free βhCG Subunit: Immunoradiometric assay	Cat#: A1-1010	Cat#: A1-3623	< 0.3 IU/L
FERRITIN: Immunoradiometric assay Enzyme-linked immunosorbent assay	(polyclonal antibody) Cat#FER01	Cat#FER01 (monoclonal antibody)	< 0.5 ug/L < 2.0 ug/L
FSH: Immunoradiometric assay Enzyme-linked immunosorbent assay	Cat#: A1-797 (polyclonal antibody)	Cat#: A1-7824 Cat#: A1-797	< 0.5 IU/L < 0.5 IU/L
GH: Immunoradiometric assay Enzyme-linked immunosorbent assay	Cat#: A1-549 Cat#: A1-549	Cat#: A1-1911B (polyclonal antibody)	< 0.2 mIU/L < 0.1 mIU/L
hCG (whole molecule): Immunoradiometric assay	Cat#: A1-6722	Cat#: A1-261	< 1.0 IU/L
LH: Immunoradiometric assay	Cat#: A1-4LH3A2	(monoclonal antibody)	< 0.05 IU/L
PRL: Immunoradiometric assay Enzyme-linked immunosorbent assay	Cat#: A1-5319 Cat#: A1-5319	Cat#: A1-6111 (polyclonal antibody)	< 2.0 mIU/L < 10 mIU/L
TSH: Immunoradiometric assay Enzyme-linked immunosorbent assay	Cat#: A1-1417 Cat#: A1-1417	Cat#: A1-811 (polyclonal antibody)	< 0.05 mIU/L < 0.05 mIU/L

References: Refer to the Technical Data Sheets for each antibody for more detailed information.

Precautions:

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Technical Data Sheet:

ELEGANCE Streptavidin-Peroxidase Development Kit

Catalogue#:	ESDK480	Component Cat.#	Amount / bottle	No. of bottles
	Amplification Reagent	EAMP10.480	50mL	1
	Substrate Buffer (H ₂ O ₂)	ESB20	20mL	2
	Substrate Tablets (OPD)	EST4	4x4mg	2

Description: Streptavidin-peroxidase amplification substrate system designed to detect biotinylated reagents in immunological detection systems.

Contents:

Amplification Reagent:

Streptavidin-peroxidase in a buffered solution containing bovine serum albumin and a violet dye. Contains Bronidox L, 0.2% v/v and thiomersal, 0.02% w/v. Ready-to-use.

Substrate Buffer:

Urea Peroxide (H₂O₂) in a citrate-phosphate buffer. Contains thiomersal, 0.01% w/v.

Substrate Tablets:

Ortho-phenylenediamine (4mg each) with inactive ingredients.

Background:

Biotin is a readily water-soluble substance that binds with one of the highest naturally known affinities (10⁻¹⁵ mol⁻¹) to avidin and streptavidin. The binding is almost irreversible in nature. Each of the proteins has 4 binding sites for biotin. This has an amplification effect and can be used to enhance sensitivities of immunoassays. The isoelectric point of streptavidin is in the neutral range, and streptavidin contains no carbohydrate fractions. This means that streptavidin is useful to lower non-specific binding and backgrounds caused by coating or carbohydrate-lectin interactions, in comparison to avidin.

The ortho-phenylenediamine (OPD) is a substrate which forms a water soluble yellow product. The reaction can be stopped with 1M H₂SO₄ and the product formed is orange.

Usage:

This conjugate/substrate system can be used for the detection of biotin-labeled substances, eg., biotinylated antibodies, which can be used for a variety of applications. For example, ELISA for antigen quantification, and for screening procedures for detection of hybridoma antibodies. Biotinylated preparations, eg. biotinylated antibodies can be purchased, or synthesised by the user.

Storage:

Refrigerate all components at 2-8⁰C until expiry. *Do not freeze!*

Preparation:

The Amplification Reagent is supplied as ready-to-use. With some applications, a titration of the Amplification Reagent may be required. If the Amplification Reagent requires dilution, we recommend using 0.1M phosphate buffered saline (PBS). Working dilutions of the Amplification Reagent must be used within 24 hours.

To prepare the working substrate solution, place 1 OPD tablet per 5mL Substrate Buffer in a vial and wait until the tablets have completely dissolved and no bubbles remain (1-2 minutes). Place stopper on vial and mix by inversion. Substrate solution should remain clear. The working substrate solution must be used within 30 minutes of preparation.

Continues

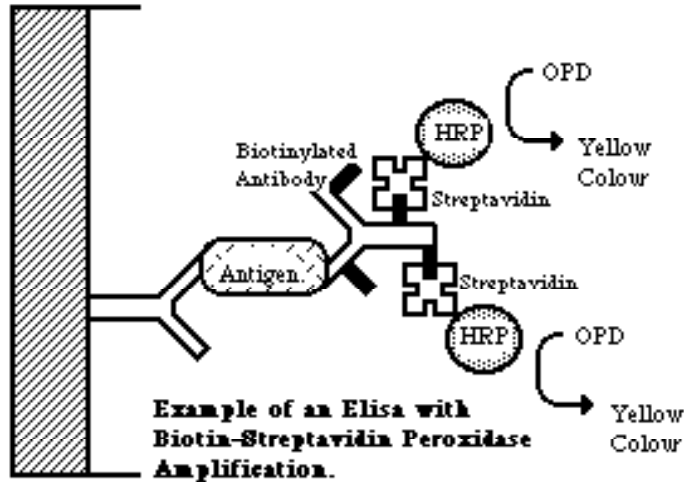
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Technical Data Sheet...continued

ELEGANCE Streptavidin-Peroxidase Development Kit



Instructions for use in ELISA:

The following protocol is recommended for use in ELISA applications. The volume of Amplification Reagent and substrate solution used should relate to the volume of antibody coated in the wells.
 Wash plate 4 times
 Add 100uL Amplification Reagent



Incubate shaking for 10 minutes at room temperature
 Wash plate 4 times
 Add 100uL Substrate Solution (Stop reaction if required with 1M H₂SO₄)
 Read absorbance of plate and calculate results

Absorbance Measurements:

The OPD produces a yellow water-soluble product.
 For KINETIC assays, read at a wavelength of 435nm (or 450nm). Ensure that the reading occurs during the linear phase of the colour development.
 For ENDPOINT assays, stop the reaction when appropriate with 50uL 1M H₂SO₄. The product will be a more orange water-soluble product. Read at a wavelength of 490nm. The reading step should be carried out within 30 minutes of stopping the reaction.
When to stop the endpoint reaction: The point at which the substrate reaction is stopped is determined by the user and the ELISA reader. The OD values should be monitored and the substrate reaction should be stopped before the positive wells are no longer readable. To reduce the intensity of the reaction, it is recommended that the antibody concentration or the Amplification Reagent concentration are further diluted. Do not dilute the substrate solution further.

Special Precautions:

Preservatives: It is recommended to add preservatives to buffers used. Sodium azide inactivates the peroxidase, and so should be avoided in any step in contact with the Amplification Reagent. We recommend 0.01% thiomersal.
Contamination: Use dedicated dispensers for the enzyme/substrate reagents and use clean glassware for substrate solution preparation. Avoid contact with metallic surfaces which can interfere with substrate.

Continues

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Technical Data Sheet...continued

***ELEGANCE* Streptavidin-Peroxidase Development Kit**

Other Products: Bioclone also has other ready-to-use ELISA products (refer to technical data sheets for information):

<i>ELEGANCE</i> TMB Substrate Solution	Cat#ETMB5	(50mL)
<i>ELEGANCE</i> ELISA Plate Blocking Buffer	Cat#EBLOCK	(1000mL)
<i>ELEGANCE</i> ELISA Wash Concentrate (15x)	Cat#EWC5	(250mL)
<i>ELEGANCE</i> Stopping Solution	Cat#ESS25	(124mL)

Precautions: For research use only. Not for human or diagnostic use. Not for therapeutic use. Sodium azide yields highly toxic acid under acidic conditions. When disposing of reagents use copious amounts of water to prevent build-up of potentially explosive azides. Avoid any skin contact with the substrate OPD. The substrate solution of OPD should be disposed of according to local regulations.

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Technical Data Sheet:

ELEGANCE TMB Substrate Solution

Catalogue#: ETMB5 (50mL)

Description: Substrate solution 3,3',5,5'-tetramethylbenzidine and hydrogen peroxide for use with peroxidase in immunological detection systems. Ready-to-use.

- Contents:** *TMB Substrate Solution*
50mL 3,3',5,5'-tetramethylbenzidine (TMB) and hydrogen peroxide in a stabilising solution.
- Background:** The 3,3',5,5'-tetramethylbenzidine (TMB) and hydrogen peroxide is a substrate which forms a water-soluble blue product. The reaction can be stopped with 1M H₂SO₄ and the product formed is yellow.
- Usage:** This substrate solution can be used for the detection of peroxidase-labelled substances, eg., streptavidin-peroxidase or antibodies conjugated to peroxidase and can be used for a variety of applications. For example, ELISA for antigen quantification.
- Storage:** Refrigerate at 2-8⁰C until expiry. *Do not freeze!* Supplied as *ready-to-use*. Prior to use, bring the reagent to room temperature.
- Instructions for use in ELISA:** The following protocol is recommended for use in ELISA applications. The volume of *ELEGANCE* TMB Substrate Solution used should relate to the volume of antibody coated in the wells.
Wash plate 4 times.
Add 100µL TMB Substrate Solution (Stop reaction if required with 1M H₂SO₄).
Read absorbance of plate and calculate results.
- Absorbance Measurements:** The TMB produces a blue water-soluble product.
For KINETIC assays, read at a wavelength of 650nm. Ensure that the reading occurs during the linear phase of the colour development.
For ENDPOINT assays, stop the reaction when appropriate with 50uL 1M H₂SO₄. The product will be yellow water-soluble product. Read at a wavelength of 450nm. The reading step should be carried out within 5 minutes of stopping the reaction.
When to stop the endpoint reaction: The point at which the substrate reaction is stopped is determined by the user and the ELISA reader. The OD values should be monitored and the substrate reaction should be stopped before the positive wells are no longer readable. To reduce the intensity of the reaction, it is recommended that titrations of conjugate or initial antibody be carried out, and further diluted. Do not dilute the substrate solution further.
- Special Precautions:** *Preservatives:* It is recommended to add preservatives to buffers used. Sodium azide inactivates the peroxidase, and so avoid in any step in contact with the enzyme. We recommend 0.01% thiomersal.
Contamination: Use dedicated dispensers for the enzyme/substrate reagents and use clean glassware for substrate solution. Avoid contact with metallic surfaces which can interfere with the substrate.
- Other Products:** Bioclone also has other ready-to-use ELISA products (refer to technical data sheets for information):
ELEGANCE Streptavidin-Peroxidase Development Kit Cat#ESDK480 (480 wells)
ELEGANCE ELISA Plate Blocking Buffer Cat#EBLOCK (1000mL)
ELEGANCE ELISA Wash Concentrate (15x) Cat#EWC5 (250mL)
ELEGANCE Stopping Solution Cat#ESS25 (124mL)
- Precautions:** For research use only. Not for human or therapeutic use.

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Bioclone's Quality Management System certified to ISO 9001, ISO 13485, GMP and CE Mark

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Technical Data Sheet:

ELEGANCE ELISA Plate Blocking Buffer

Catalogue#: EBLOCK (1 Litre)

Description: Buffer designed to block unbound sites on microwells after coating procedures, and to reduce non-specific binding and increase stability of coated material. Ready-to-use.

Contents: *ELISA Plate Blocking Buffer:*
1L of buffered solution containing proteins and surfactants. Contains Thiomersal, 0.01% w/v. Ready-to-use.

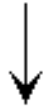
Usage: ELISA microtitre plates which have been coated with antibodies or antigens may have sites left on the plate which react with sample antigens to produce high non-specific binding. This may be reduced by treating the plate with a protein solution to block the remaining sites and to minimise non-specific binding. The *ELEGANCE* ELISA Plate Blocking Buffer contains several ingredients which combine to ensure that unwanted reactions do not occur. Note particularly that the formulation also generally imparts an increased stability to the coated materials.

Storage: Refrigerate ELISA Plate Blocking Buffer at 2-8°C until expiry.

Preparation: The blocking buffer is supplied as ready-to-use. Before use, bring the solution to room temperature.

Instructions for use in ELISA: The following protocol is recommended for use in ELISA applications. The volume of blocking buffer used should be at least double the volume of antibody or antigen coated in the wells:

Coat the plates with solution of antibody or antigen as required.
Wash plate 4 times
Add 250uL *ELEGANCE* ELISA Plate Blocking Buffer



Incubate for 2 hours at room temperature

Plates can then be:

- * stored in this buffer and washed before use
- * washed and used immediately
- * washed, dried and used within certain validated time

We recommend that the plates be stored at 2-8°C.

Wash plate 4 times

Run ELISA according to protocol.

Other Products: Bioclone also has other ready-to-use ELISA products (refer to technical data sheets for information):

<i>ELEGANCE</i> Streptavidin-Peroxidase Development Kit	Cat#ESDK480	(480 wells)
<i>ELEGANCE</i> TMB Substrate Solution	Cat#ETMB5	(50mL)
<i>ELEGANCE</i> ELISA Wash Concentrate (15x)	Cat#EWC5	(250mL)
<i>ELEGANCE</i> Stopping Solution	Cat#ESS25	(124mL)

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Technical Data Sheet:

ELEGANCE ELISA Wash Concentrate (15X)

Catalogue#: EWC5 (250 mL)

Description: Buffer designed to effectively wash ELISA plates and to minimise and reduce the effects of non-specific binding.

Contents: *ELISA Wash Concentrate: (15X)*
250mL of 15X Buffered wash solution. Contains Thiomersal, 0.09% w/v. To be diluted before use.

Usage: ELISA plates require effective washing to minimise effects of non-specific binding and to ensure that maximum sensitivity and precision is obtained. Plates can be washed manually or with an automatic plate washer. The *ELEGANCE* ELISA Wash Concentrate is formulated to effectively wash ELISA plates.

Storage: Refrigerate ELISA Wash Concentrate (15X) at 2-8°C until expiry.

Preparation: The ELISA Wash Concentrate should be diluted to the working wash solution by adding the desired amount of wash concentrate to a measuring cylinder and making the volume up with deionised or distilled water. Mix well before use. After dilution the wash solution can be stored at room temperature (20-25°C) for up to 12 weeks.

Concentrate	Dilute to	Enough for
50 mL	750 mL	1 plate
100 mL	1.5 L	2 plates
250 mL	3.75 L	5 plates

Instructions for use in ELISA: The following protocol is recommended for use in ELISA applications. We recommend aspirating the reaction liquid and rinsing each well 4 times with 250 uL of wash solution. Avoid overflows from one well to another. After the final wash, the plate should be inverted and tapped firmly on absorbent lint-free tissue to remove the last traces of wash buffer. Ensure that no air bubbles remain in the wells before proceeding to the next step.

The wash solution should be stored in a clean container to prevent contamination with substances which could interfere. The washer should not be left standing with wash solution for long periods of time. At the end of each day, the washer should be rinsed with distilled water.

Other Products: Bioclone also has other ready-to-use ELISA products (refer to technical data sheets for information):

<i>ELEGANCE</i> Streptavidin-Peroxidase Development Kit	Cat#ESDK480	(480 wells)
<i>ELEGANCE</i> TMB Substrate Solution	Cat#ETMB5	(50mL)
<i>ELEGANCE</i> ELISA Plate Blocking Buffer	Cat#EBLOCK	(1000mL)
<i>ELEGANCE</i> Stopping Solution	Cat#ESS25	(124mL)

Precautions:
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Technical Data Sheet:

ELEGANCE Stopping Solution

Catalogue#: ESS25 (124 mL)

Description: Stopping solution 1M H₂SO₄ for use with substrate reactions. Ready-to-use.

Contents: *ELISA Stopping Solution:*
124 mL 1M H₂SO₄.

Usage: The peroxidase-TMB or peroxidase-OPD enzyme-substrate reactions can be stopped with 1M H₂SO₄ and the product formed is then stable for endpoint reading of absorbances.

Storage: Refrigerate at 2-8⁰C until expiry. *Do not freeze!*

Preparation: Supplied as *ready-to-use*. Prior to use, bring the reagent to room temperature.

Instructions for use in ELISA: The following protocol is recommended for use in ELISA applications. It is recommended that 50µL of Stopping Solution (1M H₂SO₄) be used. Read absorbance of plate and calculate result.

Absorbance Measurements: *OPD Chromogenic Substrate:*
For ENDPOINT assays, stop the reaction when appropriate with 50uL 1M H₂SO₄. The product will be a slightly orange water-soluble product. Read at a wavelength of 490nm. The reading step should be carried out within 30 minutes of stopping the reaction.

TMB Chromogenic Substrate:
For ENDPOINT assays, stop the reaction when appropriate with 50uL 1M H₂SO₄. The product will be a yellow water-soluble product. Read at a wavelength of 450nm. The reading step should be carried out within 5 minutes of stopping the reaction.

When to stop the endpoint reaction: The point at which the substrate reaction is stopped is determined by the user and the ELISA reader. The OD values should be monitored and the substrate reaction should be stopped before the positive wells are no longer readable. To reduce the intensity of the reaction, it is recommended that titrations of conjugate or initial antibody be carried out, and further diluted. Do not dilute the substrate solution further.

Special Precautions: *Preservatives:* It is recommended to add preservatives to buffers used. Sodium azide inactivates the peroxidase, and so avoid in any step in contact with the enzyme. We recommend 0.01% thiomersal. *Contamination:* Use dedicated dispensers for the enzyme/substrate reagents and use clean glassware for substrate solution. Avoid contact with metallic surfaces which can interfere with the substrate.

Other Products: Bioclone also has other ready-to-use ELISA products (refer to technical data sheets for information):

<i>ELEGANCE</i> Streptavidin-Peroxidase Development Kit	Cat#ESDK480	(480 wells)
<i>ELEGANCE</i> TMB Substrate Solution	Cat#ETMB5	(50mL)
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