### Myeloma Source Immunoglobulins

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Specificity</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>642311</td>
<td>Human IgG</td>
<td>0.1 mg</td>
</tr>
<tr>
<td>642321</td>
<td>Human IgG</td>
<td>0.1 mg</td>
</tr>
<tr>
<td>642331</td>
<td>Human IgG</td>
<td>0.1 mg</td>
</tr>
<tr>
<td>642341</td>
<td>Human IgG</td>
<td>0.1 mg</td>
</tr>
<tr>
<td>643341</td>
<td>Mouse IgA</td>
<td>1 mg</td>
</tr>
<tr>
<td>643351</td>
<td>Mouse IgG</td>
<td>1 mg</td>
</tr>
<tr>
<td>643361</td>
<td>Mouse IgG</td>
<td>1 mg</td>
</tr>
<tr>
<td>643371</td>
<td>Mouse IgM</td>
<td>1 mg</td>
</tr>
</tbody>
</table>

### Miscellaneous Proteins

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>150274</td>
<td>Allophycocyanin</td>
<td>500 µg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 mg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 mg</td>
</tr>
<tr>
<td>770941</td>
<td>α₁-Antichymotrypsin</td>
<td>100 µg</td>
</tr>
<tr>
<td>770942</td>
<td></td>
<td>500 µg</td>
</tr>
<tr>
<td>770943</td>
<td></td>
<td>1 mg</td>
</tr>
<tr>
<td>771003</td>
<td>CA 15-3 (Breast Tumor Marker Antigen)</td>
<td>5 KU</td>
</tr>
<tr>
<td>771004</td>
<td>Iodination Grade</td>
<td>10 KU</td>
</tr>
<tr>
<td>771005</td>
<td></td>
<td>20 KU</td>
</tr>
<tr>
<td>770972</td>
<td>CA 19-9 (GI-Pancreatic Tumor Marker Antigen)</td>
<td>5 KU</td>
</tr>
<tr>
<td>770973</td>
<td>Iodination Grade</td>
<td>25 KU</td>
</tr>
<tr>
<td>770974</td>
<td></td>
<td>50 KU</td>
</tr>
<tr>
<td>770983</td>
<td>CA 19-9 (GI-Pancreatic Tumor Marker Antigen)</td>
<td>5 KU</td>
</tr>
<tr>
<td>770984</td>
<td>Iodination Grade</td>
<td>25 KU</td>
</tr>
<tr>
<td>770985</td>
<td></td>
<td>50 KU</td>
</tr>
<tr>
<td>770931</td>
<td>α-Fetoprotein, Human Cord Serum</td>
<td>100 µg</td>
</tr>
<tr>
<td>770932</td>
<td>Iodination Grade</td>
<td>500 µg</td>
</tr>
<tr>
<td>770933</td>
<td></td>
<td>1 mg</td>
</tr>
<tr>
<td>193550</td>
<td>Hemocyanin</td>
<td>5 mg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25 mg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 mg</td>
</tr>
<tr>
<td>770951</td>
<td>β₂-Microglobulin</td>
<td>100 µg</td>
</tr>
<tr>
<td>770952</td>
<td></td>
<td>500 µg</td>
</tr>
<tr>
<td>770953</td>
<td></td>
<td>1 mg</td>
</tr>
</tbody>
</table>

### SUPPLEMENTARY REAGENTS

#### Labeling Reagents

**Avidin/Streptavidin**

Progress in ELISA, immunoblotting and immunohistochemical techniques has led to widespread use of the avidin/streptavidin-biotin interaction. Both avidin and streptavidin demonstrate high affinity for biotin rendering this reaction as an extremely sensitive detection method.

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>55827</td>
<td>Avidin</td>
<td>5 mg</td>
</tr>
<tr>
<td>55963</td>
<td>Avidin-AP</td>
<td>1 mg</td>
</tr>
<tr>
<td>623531</td>
<td>Avidin-AP</td>
<td>2 ml</td>
</tr>
<tr>
<td>55880</td>
<td>Avidin-FITC</td>
<td>5 mg</td>
</tr>
<tr>
<td>623501</td>
<td>Avidin-FITC</td>
<td>5 mg</td>
</tr>
<tr>
<td>55984</td>
<td>Avidin-HRP</td>
<td>5 mg</td>
</tr>
<tr>
<td>623521</td>
<td>Avidin-HRP</td>
<td>2 ml</td>
</tr>
<tr>
<td>55894</td>
<td>Avidin-HRP</td>
<td>5 mg</td>
</tr>
<tr>
<td>623001</td>
<td>Streptavidin</td>
<td>1 mg</td>
</tr>
<tr>
<td>623431</td>
<td>Streptavidin-AP</td>
<td>2 ml</td>
</tr>
<tr>
<td>623411</td>
<td>Streptavidin-FITC</td>
<td>1 mg</td>
</tr>
<tr>
<td>623441</td>
<td>Streptavidin-HRP</td>
<td>2 ml</td>
</tr>
</tbody>
</table>

#### Biotin Conjugates

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>55964</td>
<td>Biotin-AP</td>
<td>1 ml</td>
</tr>
<tr>
<td>622671</td>
<td>Biotin-AP</td>
<td>2 mg</td>
</tr>
<tr>
<td>622681</td>
<td>Biotin-HRP</td>
<td>5 mg</td>
</tr>
<tr>
<td>622611</td>
<td>Biotin Hydrazide</td>
<td>100 mg</td>
</tr>
<tr>
<td>622601</td>
<td>Biotin-N-Hydroxysuccinimide Ester</td>
<td>100 mg</td>
</tr>
<tr>
<td>622651</td>
<td>Biotin-Protein A</td>
<td>2 mg</td>
</tr>
<tr>
<td>622661</td>
<td>Biotin-Protein G</td>
<td>1 mg</td>
</tr>
</tbody>
</table>

#### FITC

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>55879</td>
<td>Fluorescein 5-Isothiocyanate, Isomer I</td>
<td>100 mg</td>
</tr>
</tbody>
</table>

#### Enzymes

**ALKALINE PHOSPHATASE**  

**Labeling Grade**

Lyophilized powder containing 30% carbohydrate as a stabilizer.

**Activity:** 1,000 units/mg of protein

There is no detectable adenosine deaminase, adenosine 5'-monophosphate deaminase or phosphodiesterase activities.

**Unit Definition:** one unit will liberate 1 µmole of p-nitrophenol from p-nitrophenylphosphate per minute at 37°C by the Bessey® assay procedure.

Substrates and Buffers

For added convenience, a complete line of chromogen substrates are available in ready-to-use liquid form or easy-to-use concentrate form. Additionally, ICN offers a complete line of powdered substrates and buffers for various protocols. For more details, please contact ICN Technical Service at biotech@icnbiomed.com.

Alkaline Phosphatase Substrates

**BCIP/INT LIQUID SUBSTRATE**
(5-Bromo-4-chloro-3-indolyl Phosphate/p-Iodonitrotetrazolium)

Stabilized Chromogen Solution
Similar to BCIP/NBT but results in an intense orange color. Concentration: 0.46 mmol/liter BCIP; 0.79 mmol/liter INT.

980621
100 ml
980622
500 ml

**BCIP/NBT LIQUID SUBSTRATE**
(5-Bromo-4-chloro-3-indolyl Phosphate/Tetranitroblue Tetrazolium)

Stabilized Chromogen Solution
Similar to BCIP/NBT Plus but is even more sensitive and produces an intense purple color. It is highly useful in double antibody staining procedures when used with BCIP/INT where phosphatase labeled antibodies are preferred. Concentration: 0.452 mmol/liter BCIP; 0.432 mmol/liter TNBT.

821821
100 ml
821822
500 ml

**BCIP/NBT PLUS LIQUID SUBSTRATE**
(5-Bromo-4-chloro-3-indolyl Phosphate/Nitroblue Tetrazolium)

Stabilized Chromogen Solution
Ideal for both immunoblotting and immunohistochemical procedures. Greater sensitivity and produces little or no background staining compared with other alternatives. Concentration: 0.692 mmol/liter BCIP; 0.734 mmol/liter NBT.

980781
100 ml
980782
500 ml

**BCIP/INT**

Stabilized Chromogen Solution contains the two components in a stabilized solution which may be used as the final step in color development. The resulting product is a permanent, deep-purple stain. It enhances results in both ELISA and immunohistochemical assays utilizing peroxidase and alkaline phosphatase.

980621
100 ml
980622
250 ml

**5-BROMO-4-CHLORO-3-INDOLYL PHOSPHATE LIQUID SUBSTRATE**
(BCIP)

Stabilized Substrate
Ideal, ready-to-use solution for immunoblotting and immunohistochemical procedures. Concentration: 2.31 mmol/liter.

980781
100 ml
980782
500 ml

**5-BROMO-4-CHLORO-3-INDOLYL PHOSPHATE STABILIZED CHROMOGEN SOLUTION**

This alkaline phosphatase chromogen solution contains the two components in a stabilized solution which may be used as the final step in color development. The resulting product is a permanent, deep-purple stain. It enhances results in both ELISA and immunohistochemical assays utilizing peroxidase and alkaline phosphatase.

980621
100 ml
980622
250 ml

**FAST RED RC SALT**

Dye content: Min. 80.0%

(C7H6Cl2N2O)2  ZnCl2 MW 546.4

191233
RT

**NAPHTHOL AS-BI PHOSPHATE**

Naphthol Free

Substrate for assay of acid phosphatase by flow cytometry.

C18H15BrNO6P   MW 452.2

193989
0oC

**5-BROMO-4-CHLORO-3-INDOLYL PHOSPHATE**

Molecular Biology Reagent
Disodium Salt
Purity: >98%

A chromogenic substrate for alkaline phosphatase in ELISA.

C8H4BrClNO4PNa2 MW 370.4

193989
0oC

**5-BROMO-4-CHLORO-3-INDOLYL PHOSPHATE**

Molecular Biology Reagent
p-Toluidine Salt
Purity: ≥98%

A chromogenic substrate for alkaline phosphatase in ELISA.

C8H6BrClNO4P  C7H9N   MW 433.6

193989
0oC

**5-BROMO-4-CHLORO-3-INDOLYL PHOSPHATE**

Molecular Biology Reagent
Disodium Salt
Purity: >98%

A chromogenic substrate for alkaline phosphatase in ELISA.

C8H4BrClNO4PNa2 MW 370.4

193989
0oC

**5-BROMO-4-CHLORO-3-INDOLYL PHOSPHATE**

Molecular Biology Reagent
Disodium Salt
Purity: >98%

A chromogenic substrate for alkaline phosphatase in ELISA.

C8H4BrClNO4PNa2 MW 370.4
**Immunobiologicals**

<table>
<thead>
<tr>
<th>CATALOG NUMBER</th>
<th>NAPHTHOL AS-BI PHOSPHATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>190867</td>
<td>50 mg</td>
</tr>
<tr>
<td>0°C</td>
<td>Sodium Salt</td>
</tr>
<tr>
<td>190868</td>
<td>100 mg</td>
</tr>
<tr>
<td>0°C</td>
<td>C_{18}H_{33}BrNO_6PNa_2</td>
</tr>
<tr>
<td>190869</td>
<td>500 mg</td>
</tr>
<tr>
<td>0°C</td>
<td>MW 496.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CATALOG NUMBER</th>
<th>NAPHTHOL AS-CL PHOSPHATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>192411</td>
<td>1 g</td>
</tr>
<tr>
<td>0°C</td>
<td>Naphthol Free</td>
</tr>
<tr>
<td>192412</td>
<td>5 g</td>
</tr>
<tr>
<td>0°C</td>
<td>Substrate for histochemical location of acid and alkaline phosphatases</td>
</tr>
<tr>
<td>192413</td>
<td>10 g</td>
</tr>
<tr>
<td>0°C</td>
<td>C_{18}H_{35}ClNO_6P</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CATALOG NUMBER</th>
<th>NAPHTHOL AS-MX PHOSPHATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>192415</td>
<td>100 mg</td>
</tr>
<tr>
<td>0°C</td>
<td>Naphthol Free</td>
</tr>
<tr>
<td>192416</td>
<td>500 mg</td>
</tr>
<tr>
<td>0°C</td>
<td>Free Acid</td>
</tr>
<tr>
<td>192417</td>
<td>1 g</td>
</tr>
<tr>
<td>0°C</td>
<td>Crystalline</td>
</tr>
<tr>
<td>192418</td>
<td>Substrate for the histochemical location of phosphatases.</td>
</tr>
<tr>
<td>192419</td>
<td>C_{19}H_{18}NO_5P</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CATALOG NUMBER</th>
<th>NAPHTHOL AS-PHOSPHATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>190870</td>
<td>50 mg</td>
</tr>
<tr>
<td>0°C</td>
<td>Sodium Salt</td>
</tr>
<tr>
<td>190871</td>
<td>100 mg</td>
</tr>
<tr>
<td>0°C</td>
<td>C_{18}H_{33}BrNO_6PNa_2</td>
</tr>
<tr>
<td>190872</td>
<td>500 mg</td>
</tr>
<tr>
<td>0°C</td>
<td>MW 496.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CATALOG NUMBER</th>
<th>NAPHTHOL AS-PHOSPHATE/FAST RED VIOLET LB SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>190873</td>
<td>250 mg</td>
</tr>
<tr>
<td>0°C</td>
<td>Sodium Salt</td>
</tr>
<tr>
<td>190874</td>
<td>500 mg</td>
</tr>
<tr>
<td>0°C</td>
<td>C_{18}H_{33}BrNO_6PNa_2 MW 496.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CATALOG NUMBER</th>
<th>NAPHTHOL AS-PHOSPHATE/NEW FUCHSIN SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>190875</td>
<td>250 mg</td>
</tr>
<tr>
<td>0°C</td>
<td>Sodium Salt</td>
</tr>
<tr>
<td>190876</td>
<td>500 mg</td>
</tr>
<tr>
<td>0°C</td>
<td>C_{18}H_{33}BrNO_6PNa_2 MW 496.2</td>
</tr>
</tbody>
</table>

**p-NITRO BLUE TETRAZOLIUM**

<table>
<thead>
<tr>
<th>CATALOG NUMBER</th>
<th>p-NITRO BLUE TETRAZOLIUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>193999</td>
<td>50 mg</td>
</tr>
<tr>
<td>0-5°C</td>
<td>[298-83-9]</td>
</tr>
<tr>
<td>194000</td>
<td>(3,3’-Dimethoxy-4,4’-biphenylene)-bis-(2-p-nitrophenyl)-5-(phenyl)-2H-tetrazolium chloride</td>
</tr>
<tr>
<td>0-5°C</td>
<td>Molecular Biology Reagent</td>
</tr>
<tr>
<td>194001</td>
<td>Ideal for alkaline phosphatase conjugate detection in nucleic acid probe detection systems.</td>
</tr>
<tr>
<td>194002</td>
<td>C_{14}H_{24}N_{12}O_{18}P</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CATALOG NUMBER</th>
<th>p-NITROBLUE TETRAZOLIUM LIQUID SUBSTRATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>194003</td>
<td>250 mg</td>
</tr>
<tr>
<td>0°C</td>
<td>[298-83-9]</td>
</tr>
<tr>
<td>194004</td>
<td>(3,3’-(3,3’-Dimethoxy-4,4’-biphenylene)-bis-(2-p-nitrophenyl)-5-(phenyl)-2H-tetrazolium chloride)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CATALOG NUMBER</th>
<th>p-NITROPHENYL PHOSPHATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>194005</td>
<td>250 mg</td>
</tr>
<tr>
<td>0°C</td>
<td>Disodium Salt</td>
</tr>
<tr>
<td>194006</td>
<td>Purity: 99+ %</td>
</tr>
<tr>
<td>0°C</td>
<td>Free p-nitrophenol &lt;0.005%</td>
</tr>
<tr>
<td>194007</td>
<td>Suitable for use as a substrate for alkaline and acid phosphatase.</td>
</tr>
<tr>
<td>194008</td>
<td>C_{6}H_{12}N_{10}O_{6}PNa_2 • H_2O</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CATALOG NUMBER</th>
<th>p-NITROPHENYL PHOSPHATE POWDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>194009</td>
<td>6 tablets</td>
</tr>
<tr>
<td>0°C</td>
<td>(PNPP) Alkaline Phosphatase Substrate</td>
</tr>
<tr>
<td>194010</td>
<td>Two tablets when dissolved in 1 ml deionized water makes a ready-to-use buffered solution of pNPP.</td>
</tr>
<tr>
<td>194011</td>
<td>Each tablet contains 5.0 mg.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CATALOG NUMBER</th>
<th>p-NITROPHENYL PHOSPHATE LIQUID CONCENTRATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>194012</td>
<td>250 mg</td>
</tr>
<tr>
<td>0°C</td>
<td>Di(Tris) Salt</td>
</tr>
<tr>
<td>194013</td>
<td>Purity: 99+ %</td>
</tr>
<tr>
<td>0°C</td>
<td>Substrate for assay of alkaline phosphatase.</td>
</tr>
<tr>
<td>194014</td>
<td>C_{6}H_{12}N_{10}O_{6}PNa_2 • H_2O MW 461.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CATALOG NUMBER</th>
<th>p-NITROPHENYL PHOSPHATE LIQUID CONCENTRATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>194015</td>
<td>6 vials</td>
</tr>
<tr>
<td>0°C</td>
<td>(PNPP) Alkaline Phosphatase Substrate</td>
</tr>
<tr>
<td>194016</td>
<td>Two tablets when dissolved in 1 ml deionized water makes a ready-to-use buffered solution of pNPP.</td>
</tr>
<tr>
<td>194017</td>
<td>Each tablet contains 5.0 mg.</td>
</tr>
</tbody>
</table>

To place an order: (800) 854-0530 fa ((800) 334-6999 fax (800) 557-4872 E-mail: sales@icnbiomed.com

www.icnbiomed.com
**p-NITROPHENYL PHOSPHATE LIQUID SUBSTRATE (PNPP)**
Stabilized Substrate
Ready-to-use solution. Excellent for alkaline phosphatase ELISA assays. Supplied buffered in DEA. Concentration: 0.352 mmol/liter.

980811 100 ml
980812 500 ml

**Peroxidase Substrates**

195039 RT

3-AMINO-9-ETHYLCARBAZOLE
10 g
[132-32-1] Peroxidase indicator

821811 RT

3-AMINO-9-ETHYLCARBAZOLE STABILIZED CONCENTRATE
10 ml
50X Liquid Concentrate
Safe • Convenient • Simple
A precipitable peroxidase substrate for immunoblotting and immunohistochemical staining techniques. AEC produces an alcohol soluble red end product. In immunohistology, aqueous mounting media and counterstains must be used. For use with 10X AEC Buffer. Supplied as 0.095 M.

821813 RT

3-AMINO-9-ETHYLCARBAZOLE STABILIZED CONCENTRATE BUFFER
50 ml
10X Liquid Concentrate Buffer
For use with AEC Stabilized Concentrate for immunoblotting and immunohistochemical staining techniques. AEC produces an alcohol soluble red end product. In immunohistology, aqueous mounting media and counterstains must be used.

154770 0-5°C

5-AMINOSALICYLIC ACID
25 g
[89-57-6] (5-Amino-2-hydroxybenzoic acid)
Purity: 99%
Off-white to gray powder. C_{7}H_{7}NO_{3} MW 153.1

150629 0°C

4-CHLORO-1-NAPHTHOL
2 g
5 g
[604-44-4] Purity: 97%
Off-white to tan crystals

152347 0-5°C

4-CHLORO-1-NAPHTHOL STABILIZED CHROMOGEN
50 ml
100 ml Chromogen solution for immunohistology procedures and peroxidase and pseudo-peroxidase reactions. Ready-to-use directly as the final step in developing the color indicator in the enzyme reaction. Precipitates as a readily detected marker for immunohistopathological staining. Stable up to 15 months.

4-CHLORO-1-NAPHTHOL STABILIZED CHROMOGEN
50 ml
100 ml Ready-To-Use solution suitable for immunohistology procedures, peroxidase reactions, and pseudo-peroxidase reactions. It precipitates as a readily detected marker for immunohistopathological staining.

150825 0°C

3,3´-DIAMINOBENZIDINE
1 g
5 g
[7411-49-6] (DAB) Tetrahydrochloride
Color: white to pink
Reagent used in colorimetric analysis of Se and other metals.
Ref.: Anal. Chem., 30, 1370 (1958). C_{12}H_{14}N_{4} 4HCl MW 360.1

150826 0°C

3,3´-DIAMINOBENZIDINE TABLETS
25 mg
100 mg Each tablet contains 5 mg.

3,3´-DIAMINOBENZIDINE
6 vials

3,3´-DIAMINOBENZIDINE TABLETS
100 tabs.

To place an order: (800) 854-0530 fax (800) 334-6999
Outside the U.S.: (714) 545-0100 fax (714) 557-4872
3,3'-DIAMINOBENZIDINE (DAB) STABLE SUBSTRATE SOLUTION KIT
(DAB Solution)
• Ready-to-Use
• Safer Handling
• Convenient
• Improves Efficiency.
For immunoblotting and immunohistochemical techniques.

980571 300 ml
980572 800 ml

3,3'-DIAMINOBENZIDINE LIQUID CONCENTRATE (DAB)
50X Stabilized Liquid Concentrate
This substrate is widely used for both immunoblotting and immunohistochemical staining techniques. It produces an insoluble end product which is brown and not alcohol soluble. DAB is a suspected carcinogen. Supplied as 0.0694 M and use with DAB Concentrate Buffer.

821815 10 ml
821816 100 ml

3,3'-DIAMINOBENZIDINE LIQUID CONCENTRATE BUFFER (DAB Buffer)
10X Liquid Concentrate Buffer
For use with DAB Liquid Concentrate for both immunoblotting and immunohistochemical staining techniques. It produces an insoluble end product which is brown and not alcohol soluble.

821817 50 ml
821818 500 ml

3,3'-DIAMINOBENZIDINE (DAB) METAL ENHANCED KIT
1 kit 145.00
The metal ions allow a far more dense stain forming a localized deep blue black precipitate.

151827 RT 3,3',5,5'-TETRAMETHYLBENZIDINE
100 mg
Crystalline
Purity: 99+%
Reported to be a noncarcinogenic analog of benzidine; useful in gel staining procedure for low levels of heme-associated peroxidases and for enzyme immunoassay of horseradish peroxidase.

C16H20N2 MW 240.3

196025 RT 3,3',5,5'-TETRAMETHYLBENZIDINE LIQUID SUBSTRATE
50 ml
100 ml
Ready-to-Use
Convenient
Reproducible Results
Consistent Performance and Sensitivity
Stabilized chromogen solution, 1.25 mmol/liter, for ELISA procedures and peroxidase and pseudo-peroxidase reactions.
Stable up to 15 months, insensitive to exposure to light.

3,3',5,5'-TETRAMETHYLBENZIDINE LIQUID SUBSTRATE
50 ml
100 ml
Ready-to-Use
Convenient
Reproducible Results
Consistent Performance and Sensitivity
Stabilized chromogen solution, 1.56 mmol/liter, peroxidase substrate.
Stable up to 15 months, insensitive to exposure to light.

To place an order: (800) 854-0530 fax (800) 334-6999 www.icnbiomed.com
Outside the U.S.: (714) 545-0100 fax (714) 557-4872 E-mail: sales@icnbiomed.com
Chemiluminescence Substrates

AQUORIN

0°C

From Jellyfish (Aequorea sp.)

Purified powder

A bioluminescent protein used in immunoassay procedures. It is reported to measure calcium serum and subcellular organelle levels less than 10 µM.


STAR-GLO™ CHEMILUMINESCENT SUBSTRATE

Peroxidase substrate system

Each system contains equal volumes of solutions A and B for enhanced chemiluminescent detection in immunoblotting procedures involving peroxidase.

Other Substrates and Related Products

5-BROMO-4-CHLORO-3-INDOLYL-N-ACETYL-β-D-GLUCOSAMINIDE

[4264-82-8]

(5-Bromo-4-chloro-3-indolyl-2-acetamido-2-deoxy-β-D-glucopyranoside; X-GlcNAc)

Purity: ≥98%

N-Acetylgalactosaminidase histochemical substrate that releases an insoluble blue chromophore after enzymatic action. Protect from light and humidity.

C16H18BrClN2O6 MW 449.7

5-BROMO-4-CHLORO-3-INDOLYL-α-D-GALACTOPYRANOSIDE

[107021-38-5]

(5-Bromo-4-chloro-3-indolyl-α-D-galactoside; X-α-D-Galactoside)

Purity: ≥98%

An α-galactoside substrate which differentiates α-galactosidase-positive yeast strains or bacteria. Protect from light and humidity.

C16H18BrClN2O6 MW 408.6

5-BROMO-4-CHLORO-3-INDOLYL-β-D-GALACTOPYRANOSIDE

[7240-90-6]

(X-Gal; 5-Bromo-4-chloro-3-indolyl-β-D-galactoside)

Molecular Biology Reagent

Purity: ≥98%

Used as indigogenic substrate for β-galactosidase, for detection of β-galactosidase-positive clones, and the identification of lac- and bacterial colonies or phage plaques.

C16H18BrClN2O6 MW 408.6

5-BROMO-6-CHLORO-3-INDOLYL-β-D-GALACTOPYRANOSIDE

(5-Bromo-6-chloro-3-indolyl-β-D-galactoside; Magenta-GAL)

Purity: ≥98%

A chromogenic substrate for β-D-galactosidase and an alternative to X-GAL which produces an insoluble magenta chromophore in lac- bacterial colonies. It may be used in histochemistry for enzyme activity localization in mammalian tissues.

Protect from light and humidity.

C16H19BrClN2O6 MW 411.7

5-BROMO-4-CHLORO-3-INDOLYL-β-D-GLUCOPYRANOSIDE

[15548-60-4]

(5-Bromo-4-chloro-3-indolyl-β-D-glucoside; X-Glc; X-Glucoside)

Purity: ≥98%

A β-D-glucosidase substrate which renders an insoluble indigo-blue chromophore (615 nm) upon enzymatic action. For histochemistry procedures, it acts as an indicator probe and detects β-glucosidase positive organisms in cell culture.

Protect from light and humidity.

C16H18BrClN2O6 MW 408.6

5-BROMO-4-CHLORO-3-INDOLYL-β-D-GLUCURONIDE

[129541-41-9]

(X-GlcA; X-Glucuro)

Molecular Biology Reagent

Sodium Salt

Purity: ≥98%

A β-glucuronidase substrate which forms an intense blue precipitate upon enzymatic action. Used for the detection of the GUS gene in bacterial colonies and in histochemical applications.

Protect from light and humidity.

C14H13BrClNO7Na MW 444.6

COBALT SULFATE SOLUTION

Concentration: 2% w/v

Specially prepared for intensification of DAB on tissue sections and blots.

COPPER CHLORIDE SOLUTION

Concentration: 1% w/v

Specially prepared for intensification of DAB on tissue sections and blots.
## Immunobiologials

### 4-METHYLUMBELLIFERYL PHOSPHATE LIQUID SUBSTRATE (MUP)
- **Stabilized Liquid Substrate**
- A ready-to-use, sensitive fluorogenic substrate for alkaline phosphatase procedures.
- Concentration: 0.6 mmol/liter.

### NICKEL SULFATE SOLUTION
- **Concentration:** 2% w/v
- Specially prepared for intensification of DAB on tissue sections and blots.

### PHENOLPHTHALEIN MONOPHOSPHATE LIQUID SUBSTRATE (PMP)
- **Stabilized Substrate**
- Ready-to-use solution.
- For use in alkaline phosphatase systems for quantitative analysis procedures.
- Concentration: 1.68 mmol/liter.

### SILVER METHENAMINE SOLUTION
- **Concentration:** 4% w/v
- Specially prepared for intensification of DAB on tissue sections and blots.

### Biological Buffers

#### ANTIBODY DILUENT, Normal
- Ready-to-use diluent for primary antibodies and secondary antibodies. Antibodies diluted in this reagent can be stored between 4-8°C for up to 18 months.

#### ENZYME LABEL DILUENT
- Ready-to-use diluent for enzyme labeled antibodies and streptavidin/avidin enzyme conjugates. Subjected to 0.2 micron filtration. Diluted reagents can be stored between 4-8°C for up to 18 months.

#### GLYCEROL
- **Molecular Biology Reagent**
- Purity: 99+% 
- Heavy metals (Pb): <5 ppm
- No detectable DNase, RNase, or protease.
- Prevents back-diffusion and protein samples into the buffer.
- C3H8O3 MW 92.09

## Supplementary Reagents

### GOLD LABEL DILUENT
- Ready-to-use diluent for gold labeled antibodies formulated to maximize stability and minimize background. Subjected to 0.2 micron filtration. Diluted reagents can be stored between 4-8°C for up to 18 months.

### HEPES
- **(N-2-Hydroxyethyl)piperazine-N’-2-ethanesulfonic acid)**
- **Molecular Biology Reagent**
- Purity: 99+% 
- **Free Acid**
- Zwitterionic Buffer useful in the pH range 6.8-8.2.
- pKa = 7.55 at 25°C
- C6H17N2O4SNa MW 260.3

### MES
- **(2-[N-Morpholino]ethanesulfonic acid)**
- **Molecular Biology Reagent**
- Purity: ≥99%
- Zwitterionic buffers
- pKa = 6.15 at 25°C
- C6H13NO4SH2O MW 213.2

### MOPS
- **(3-[N-Morpholino]propanesulfonic acid)**
- **Molecular Biology Reagent**
- Purity: 99+% 
- **Free Acid**
- Useful buffer range: 6.5-7.9
- C7H15NO4S MW 209.3

---

To place an order: (800) 854-0530 fax (800) 334-6999
Outside the U.S.: (714) 545-0100 fax (714) 557-4872

www.icnbiomed.com E-mail: sales@icnbiomed.com
**Purification Reagents**

**Protein A and Conjugates**

Protein A is a single polypeptide chain of 42 kDa prepared from Cowan I strain of *Staphylococcus aureus*. It is characterized by its ability to bind directly to the Fc portion of immunoglobulins of many animal species. Typically, this binding occurs in less than 30 minutes without interruption from EDTA or detergent. In addition, binding to the Fc portion does not affect binding the Fab site.

**PROTEIN A**
- From *S. aureus*, Cowan I
- **Bacterial Adsorbent**
- This product will bind the Fc portion of immunoglobulin of many different animal species. Antibody binding is achieved in less than 30 minutes at a temperature range of 4°C-37°C. Lyophilized
- See the Immunobiologicals section for further details.

**PROTEIN A**
- From *S. aureus*, Cowan I
- **Recombinant**
- Lyophilized, salt-free
- Purity: 98%
- The specific activity of this product is equal to the most active Protein A preparations from *S. aureus*.

**PROTEIN A**
- From *S. aureus*, Cowan I
- **Salt-free lyophilized powder.**
- Tested for binding to human IgG using radial immunodiffusion.

**Protein A Conjugates**

These conjugates may be used to replace secondary antibodies in many different studies. Protein A-FITC conjugates are produced by a modified Goding procedure. Typical dilution is 1:50-1:200 with PBS. Protein A-AP conjugates are produced using highly purified alkaline phosphatase of bovine origin. The dilution is typically 1:1250 for blotting and 1:2000 ELISA. Protein A-HRP conjugates are supplied in a stabilizing solution and the dilution range is typically 1:1500-1:5000. It is recommended that dilutions be calculated for each particular method by the researcher.

**PROTEIN A-ALKALINE PHOSPHATASE**
- From Calf Intestinal Alkaline Phosphatase
- This product is used to replace labeled second antibodies in many immunological studies.
- Working dilution is: 1:1250 for immunoblotting, 1:2500 for ELISA.
## Immunobiologics

### PROTEIN A-ALKALINE PHOSPHATASE

**Catalog Number:** 59965  
**Presentation:** 0-5°C  
**Contents:** 2 mg  
**Description:** Lyophilized from 0.05M Tris, 0.14M sodium chloride, pH 7.5, with 0.001M magnesium chloride, 1% ovalbumin, and 0.05% sodium azide. Tested for ELISA titer on purified rabbit IgG.

### PROTEIN A-FITC

**Catalog Number:** 623601  
**Presentation:** 0-5°C  
**Contents:** 5 mg  
**Description:** This product may be used to replace labeled second antibodies in many immunological studies. It is produced by a modified procedure of Goding. The typical dilution is 1:50-1:200 with PBS.

### PROTEIN A-HORSERADISH PEROXIDASE

**Catalog Number:** 55866  
**Presentation:** 0-5°C  
**Contents:** 2 mg  
**Description:** Liquid in 0.02M PBS, pH 7.3, with 1% BSA, 10% glycerol and 0.05% sodium azide. Tested for appropriate fluorochrome-to-protein ratio and immunofluorescence on purified rabbit IgG.

### PROTEIN A-HRP

**Catalog Number:** 59902  
**Presentation:** 0-5°C  
**Contents:** 2 mg  
**Description:** Liquid in 0.01M sodium phosphate, 0.15M sodium chloride, pH 7.4, with 1% ovalbumin, 40% glycerol, and 0.1% proclin.

### PROTEIN A-BIOTIN

**Catalog Number:** 678741  
**Presentation:** 0-5°C  
**Contents:** 1 mg  
**Description:**

### PROTEIN A-COLLOIDAL GOLD

**Catalog Number:** 639651  
**Presentation:** 0-5°C  
**Contents:** 0.25 ml  
**Description:** Colloidal Gold Conjugated  
**Particle Size:** 5 nm  
**Applications:** Electron Microscopy

**Catalog Number:** 678631  
**Presentation:** 0-5°C  
**Contents:** 0.25 ml  
**Description:** Colloidal Gold Conjugated  
**Particle Size:** 10 nm  
**Applications:** Electron Microscopy

**Catalog Number:** 678641  
**Presentation:** 0-5°C  
**Contents:** 0.25 ml  
**Description:** Colloidal Gold Conjugated  
**Particle Size:** 20 nm  
**Applications:** Electron Microscopy

### PROTEIN A-[125I]

**Catalog Number:** 68049  
**Presentation:** 0-5°C  
**Contents:** 100 µCi  
**Description:** Immunological Grade  
**Sp. Act. 2-10 µCi/µg  
**74-370 kBq/µg**  
**0.1 M Potassium phosphate pH 7.5:** ethanol (1:1) with 0.5% BSA.

### PROTEIN A-AGAROSE

**Catalog Number:** 79701  
**Presentation:** 0-5°C  
**Contents:** 5 ml  
**Description:** This product may be used to replace labeled second antibodies in many immunological studies. It is produced by a modified procedure of Goding. The typical dilution is 1:50-1:200 with PBS.

### Protein G

Similar to Protein A in function, Protein G binds to the Fc region of many immunoglobulin G and is primarily used to detect, quantify and purify IgG antibodies and antigen-antibody complexes. It features two IgG binding domains and the highly charged C region. This region contains 10 lysine residues not involved in binding, and therefore, provides a convenient target for protein conjugation.

### PROTEIN G

**Catalog Number:** 672651  
**Presentation:** -20-0°C  
**Contents:** 1 mg  
**Description:** Recombinant  
**Streptococcal origin. Contains two IgG-binding B regions, binds both Fc and Fab fragments of IgG. Does not cross-react with human albumin. Essentially salt-free lyophilized powder. Freely soluble in water and standard buffers. pH stability: 2-10

### PROTEIN G-BIOTIN

**Catalog Number:** 626661  
**Presentation:** 0-5°C  
**Contents:** 1 mg  
**Description:** This product is the same as ICN Code No. 67-265-1 that has been conjugated with biotin. It is useful in ELISA and immunohistochemical procedures.

### PROTEIN G-COLLOIDAL GOLD

**Catalog Number:** 678651  
**Presentation:** 0-5°C  
**Contents:** 0.25 ml  
**Description:** Colloidal Gold Conjugated  
**Particle Size:** 5 nm  
**Applications:** Electron Microscopy

**Catalog Number:** 678631  
**Presentation:** 0-5°C  
**Contents:** 0.25 ml  
**Description:** Colloidal Gold Conjugated  
**Particle Size:** 10 nm  
**Applications:** Electron Microscopy

**Catalog Number:** 678641  
**Presentation:** 0-5°C  
**Contents:** 0.25 ml  
**Description:** Colloidal Gold Conjugated  
**Particle Size:** 20 nm  
**Applications:** Electron Microscopy

### To place an order:

**Inside the U.S.:**
- Telephone: (800) 854-0530  
- Fax: (800) 334-6999

**Outside the U.S.:**
- Telephone: (714) 545-0100  
- Fax: (714) 557-4872

**E-mail:** sales@icnbiomed.com  
**Website:** www.icnbiomed.com
PROTEIN G-HRP
1 ml
Recombinant Protein G is conjugated with highly purified horseradish peroxidase. Product is supplied in enzyme conjugate stabilizer containing 0.05% methiolate as preservative.
Recommended Working Dilutions:
1:1000 to 1:3000 for ELISA
1:5000 for Western Blotting

PROTEIN G, [125I]
10 µCi
50 µCi
100 µCi
Recombinant Grade
Sp. Act. 2-15 µCi/µg
74-655 KBq/µg
0.1 M Potassium phosphate, pH 7.5, with 0.5% BSA: ethanol solution (1:1).

Antibody Affinity Gels

ANTIBODY AFFINITY GEL
2 ml
Anti-β-Galactosidase
Host: rabbit
A gel with covalently bound rabbit antibodies purified by protein A chromatography and repeatedly absorbed with immobilized lyase from β-gal Escherichia coli strains. This antibody portion has minimal cross-reactivity to other E. coli proteins in immunoblotting. It is intended for the identification, isolation and purification of β-galactosidase-containing fusion proteins. The column capacity is at least 2 mg β-galactosidase.

ANTIBODY AFFINITY GEL
2 ml
Anti-Human IgG
Host: goat (affinity purified)
A gel with covalently bound goat antibodies purified by protein A chromatography. It is intended for the identification, isolation and purification of human IgG.

ANTIBODY AFFINITY GEL
2 ml
Anti-Mouse IgG
Host: goat (affinity purified)
A gel with covalently bound mouse antibodies purified by protein A chromatography. It is intended for the identification, isolation and purification of mouse IgG.

ANTIBODY AFFINITY GEL
2 ml
Anti-Rabbit IgG
Host: goat (affinity purified)
A gel with covalently bound rabbit antibodies purified by protein A chromatography. It is intended for the identification, isolation and purification of rabbit IgG.

ANTIBODY AFFINITY GEL
2 ml
Anti-Rat IgG
Host: goat (affinity purified)
A gel with covalently bound rat antibodies purified by protein A chromatography. It is intended for the identification, isolation and purification of rat IgG.

Coombs' Reagents

The antiglobulin ('Coombs') test has been widely employed for the diagnosis of autoimmune hemolytic anemia (AIHA). Additionally, positive test results are found in systemic lupus erythematosus and other immunological disorders. The laboratory methods for diagnosis of AIHA are simple immunohematologic procedures that can be readily performed in most labs.

COOMBS' TEST
1 ml
POLYCLONAL ANTIBODY
Anti-Canine Globulins- IgG, IgM, C3
Host: rabbit
Form: lyophilized antiserum
Applications: Autoimmune Hemolytic Anemia (AIHA) diagnosis

COOMBS' TEST
2 ml
POLYCLONAL ANTIBODY
Anti-Equine Globulins- IgG, C3
Host: rabbit
Form: lyophilized antiserum
Applications: Autoimmune Hemolytic Anemia (AIHA) diagnosis

Antibody-coated red blood cells resulting from AIHA are phagocytized by cells in the liver and spleen or lysed in the presence of complement resulting in a severe anemia. This antibody may also be used in the isoerythrolysis test in foals which is a severe hemolytic condition involving immunologically mediated lysis of red blood cells. It can also be applied in cross-matching applications to detect incomplete IgG antibodies to red blood cell antigen prior to transfusion.
## Freund's Adjuvants

**Freund's Adjuvant**

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Temperature</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>642851</td>
<td>0-5°C</td>
<td>Complete</td>
<td>50 ml</td>
</tr>
<tr>
<td>642861</td>
<td>0-5°C</td>
<td>Incomplete</td>
<td>50 ml</td>
</tr>
</tbody>
</table>

This product is made by a modification of Freund's technique, in which 25 mg of *Mycobacterium* is suspended in a mixture of 7.5 ml Arlacel A and 42.5 ml paraffin oil.

This product is made without *Mycobacterium* and contains 7.5 ml Arlacel A and 42.5 ml paraffin oil.

## Mounting and Embedding Media

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Temperature</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>11400</td>
<td>0-5°C</td>
<td>FLUOROTEC, Embedding medium</td>
<td>25 ml</td>
</tr>
<tr>
<td>11411</td>
<td>0-5°C</td>
<td>FLUOROSTAB, Embedding medium</td>
<td>25 ml</td>
</tr>
<tr>
<td>622701</td>
<td>0-5°C</td>
<td>MOUNTING MEDIUM, IMMUNO-FLUORE™</td>
<td>25 ml</td>
</tr>
</tbody>
</table>

This medium is designed for immunofluorescent preparations and is based on a solution of gelvatol with stabilizer to withstand prolonged exposure to ultraviolet light and to inhibit fading upon storage.

## Miscellaneous Products

**ACTIBIND K**

A protein from a variant of *Streptococcal* protein L that binds kappa light chains and/or the F<sub>ab</sub> portion of immunoglobulins of all types. It is also useful in the purification of monoclonal antibodies and F<sub>ab</sub> antibody fragments. Also see Q-Actibind and S-Actibind.

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>797091</td>
<td>1 mg</td>
</tr>
<tr>
<td>797092</td>
<td>2 mg</td>
</tr>
</tbody>
</table>

**ERYTHRO-LYSE™, LEUKOCYTE PREPARATION KIT**

Erythro-Lyse™ leukocyte preparation kit gently lyses erythrocytes found in whole blood at physiological pH while maintaining intact populations of leukocytes, monocytes, and granulocytes allowing for easy separation through their light scattering characteristics. Unfixed cells are maintained viable which can be used in tissue culture if the lyse buffer and wash buffer are sterile filtered. It can be used with secondary reagents and secondary antibody conjugates.

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>82321</td>
<td>1 kit</td>
</tr>
</tbody>
</table>

**GUINEA PIG COMPLEMENT**

This product is suitable for serological applications. It is specially collected and processed under “Cold Room” conditions which maintains maximum complement activity. Lyophilized, unfractionated serum. Each vial is accompanied by an appropriate volume of diluent for reconstitution.

After reconstitution, store at -20°C.

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>642831</td>
<td>10 x 1 ml</td>
</tr>
<tr>
<td>642836</td>
<td>15 ml</td>
</tr>
</tbody>
</table>

**KAPPABIND-AGAROSE**

KappaBind™ is immobilized on 4% cross-linked agarose media. Particle Size: 50-160 microns.

This product exhibits low non-specific adsorption and allows for high degrees of purification of immunoglobulins using the KappaBind™ protein ligand. It is ideal for low pressure column chromatography for immunoglobulin purification.

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>620861</td>
<td>1 ml</td>
</tr>
</tbody>
</table>
KAPPACHROM™ MEDIA
This is an antibody binding protein which binds to the kappa light chains of all antibody types. It has been covalently linked to HIPAC® media for efficient and complete purification of antibodies and antibody fragments from serum, ascites and cell culture supernatants, as well as, from microbial fermentation broth. By binding to the kappa light chains, KappaCrom™ does not interfere with the antigen binding site. It will not bind bovine immunoglobulins which may be present in culture extracts.

LIPID CONTROL, LOW (LTC)
3 x 5 ml

MOUSE COMPLEMENT
Collected from sexually mature mixed breed mixed sex mice. Complement activity is a uniform high hemolytic titer expressed as a ratio of CH50 units per milliliter of undiluted complement. Lyophilized

POLYETHYLENEIMINE
500 ml

POLYinosinATe-POLYcytidylATE
10 mg
1 g

POLY-L-LYSINE HYDROBROMIDE
100 mg

PROTExIDASE
Peroxidase Protective Buffer which stabilizes HRP conjugates. It is compatible with all common blocking agents including Bovine Serum Albumin, skim milk powder, and TWEEN 20. Protexidase provides stability of the HRP enzyme and it also inhibits microbial growth. Supplied in ready-to-use form, Protexidase is recommended for extended storage of highly diluted horseradish peroxidase conjugates. It can be stored for up to one year at 2-8°C and allows for dilutions up to 1:16,000.

RABBIT BRAIN ACETONE POWDER
Premium grade acetone powder for a wide range of coagulation diagnostics.

RABBIT COMPLEMENT TYPE (HLA-ABC)
Collected from 8-12 weeks old rabbits. Cytotoxic titer is determine by NIH standards for microlymphocytotoxicity. Minimum release criteria is 80%-100% cell death in 1:2 dilution.

RABBIT COMPLEMENT TYPE (HLA-DR)
Collected from 8-12 weeks old rabbits. Cytotoxic titer is determined by NIH standards for microlymphocytotoxicity. Minimum release criteria is 80%-100% cell death in 1:2 dilution.

RHEUMATOID FACTOR REMOVAL REAGENT
This antibody reagent is designed to remove IgM class Rheumatoid factors (IgM-RF) from serum and plasma samples. The antibody is specific for IgG when tested against human plasma and human immunoglobulins.