



## Product Information Sheet

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<b>Product Name:</b>	Recombinant Protein A-HiLyte™-555
<b>Catalog Number:</b>	AS-72236
<b>Source:</b>	<i>Escherichia coli</i> .
<b>Amount:</b>	1 mg
<b>DOS:</b>	See label on the vial.
<b>Purity:</b>	>95% by SDS-PAGE.
<b>Applications:</b>	Protein A-H555 conjugate can be used as a universal reagent to detect primary antibodies in IHC from many species including rabbit, human, some mouse IgG isotypes, and others.
<b>Fluorescence:</b>	Orange fluorescence. Excitation/Emission wavelength= 553 nm/568 nm
<b>Formulation:</b>	10mM phosphate, 150mM sodium chloride, pH 7.2, 0.1% sodium azide as preservative at 1mg/ml final concentration.
<b>Storage:</b>	Protein A dye conjugate is stable for 2~3 months at 4°C. For long-term storage, divide the solution into aliquots and store at -20°C or add an equal volume of glycerol (ACS grade or higher) and store at -20°C without aliquoting. Avoid multiple thaw-freeze cycles.
<b>Description:</b>	<p>Protein A is a non-glycosylated cell-wall protein of <i>Staphylococcus aureus</i> that can bind Fc part of immunoglobulin molecule of different species with strong affinity.<sup>1-4</sup> Protein A consists of five IgG binding domains (A, B, C, D, and E) each is approximately 60 amino acids long with no cysteines present and two <i>Staphylococcus aureus</i> cell membrane binding domains (X and M).<sup>3</sup></p> <p>Anaspec recombinant Protein A consists of only IgG binding domains and was expressed in <i>E.coli</i>. It's apparent molecular weight is approximately 30,000 Da compared to the most reported 42,000 Da for the native Protein A that is found in <i>Staphylococcus aureus</i>. Recombinant Protein A conjugated with HiLyte™-555 can be used for immunoglobulin detection in IHC and IF and for assay development.</p>

Table 1. Protein A affinity to selected species.

Immunoglobulin Species	Protein A Binding
Human IgG <sub>1</sub> , IgG <sub>2</sub> , IgG <sub>4</sub>	Strong
Human IgG <sub>3</sub> , IgD	None
Human IgM, IgA	Weak
Mouse IgG <sub>1</sub>	Weak
Mouse IgG <sub>2A</sub> , IgG <sub>2B</sub> , IgG <sub>3</sub>	Strong
Mouse IgM	None
Rat IgG <sub>1</sub>	Weak
Rat IgG <sub>2A</sub> , IgG <sub>2B</sub>	None
Rat IgG <sub>2C</sub>	Strong
Goat IgG <sub>1</sub>	Weak
Goat IgG <sub>2</sub>	Strong
Bovine IgG <sub>1</sub>	None
Bovine IgG <sub>2</sub>	Strong
Guinea Pig IgG	Strong
Rabbit IgG	Strong
Chicken IgG (IgY)	None

Related products.

Product Name	Catalog#
Protein A, 5mg, 25mg, 100mg, 1000mg	AS-72233-5, -25, -100, -1000
Protein A-Biotin Conjugate, 1mg	AS-72234
Protein A-HiLyte™-488 Conjugate, 1mg	AS-72235
Protein A-HiLyte™-647 Conjugate, 1mg	AS-72237
Protein A-HiLyte™-680 Conjugate, 1mg	AS-72238
Protein A-HiLyte™-750 Conjugate, 1mg	AS-72239

**References:**

1. Björk I., Eur. J. Biochem. **29** (1972):579-584.
2. Sjö Dahl J., Eur. J. Biochem. **78** (1977): 471-490.
3. Schröder A. K., et al., Immunology **57** (1985): 305-309.
4. Rosenberg I.M., Protein Analysis and Purification, Birkhäuser, 2005: 41-47.

**For *in vitro* research use only.**