



Product Information Sheet

Product Name:	Recombinant Protein A-HiLyte™-555
Catalog Number:	AS-72236
Source:	<i>Escherichia coli</i> .
Amount:	1 mg
DOS:	See label on the vial.
Purity:	>95% by SDS-PAGE.
Applications:	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.
Fluorescence:	Orange fluorescence. Excitation/Emission wavelength= 553 nm/568 nm
Formulation:	10mM phosphate, 150mM sodium chloride, pH 7.2, 0.1% sodium azide as preservative at 1mg/ml final concentration.
Storage:	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.
Description:	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.¹⁻⁴ Protein A consists of five IgG binding domains (A, B, C, D, and E) each is approximately 60 amino acids long with no cyteines present and two <i>Staphylococcus aureus</i> cell membrane binding domains (X and M).³ 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.

Table 1. Protein A affinity to selected species.

Immunoglobulin Species	Protein A Binding
Human IgG ₁ , IgG ₂ , IgG ₄	Strong
Human IgG ₃ , IgD	None
Human IgM, IgA	Weak
Mouse IgG ₁	Weak
Mouse IgG _{2A} , IgG _{2B} , IgG ₃	Strong
Mouse IgM	None
Rat IgG ₁	Weak
Rat IgG _{2A} , IgG _{2B}	None
Rat IgG _{2C}	Strong
Goat IgG ₁	Weak
Goat IgG ₂	Strong
Bovine IgG ₁	None
Bovine IgG ₂	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.