



Product Information Sheet

Product Name:	Protein A-HiLyte™ Fluor 647 Conjugate
Catalog Number:	AS-72237
Source:	<i>Escherichia coli</i>
Amount:	1 mg
DOS:	See label on the vial
Purity:	>95% by SDS-PAGE
Applications:	Protein A-HiLyte™ Fluor 647 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:	Near-infrared fluorescence. Excitation/Emission wavelength= 649 nm/ 674 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. The product is stable for 1 year at -20°C.
Description:	<p>Protein A is a non-glycosylated cell wall protein of <i>Staphylococcus aureus</i> that can bind the 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 approximately 60 amino acids long with no cysteines present and two <i>Staphylococcus aureus</i> cell membrane binding domains (X and M).³</p> <p>AnaSpec's recombinant Protein A consists of only IgG binding domains and was expressed in <i>E.coli</i>. Its 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™ Fluor 647 can be used for immunoglobulin detection in WB, IHC and IF and for assay development.</p>

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, recombinant 5mg, 25mg, 100mg, 1000mg	AS-72233-5, -25, -100, -1000
Protein A-Biotin Conjugate, 1mg	AS-72234
Protein A-HiLyte™ Fluor 488 Conjugate, 1mg	AS-72235
Protein A-HiLyte™ Fluor 555 Conjugate, 1mg	AS-72236
Protein A-HiLyte™ Fluor 680 Conjugate, 1mg	AS-72238
Protein A-HiLyte™ Fluor 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. *Immunol* **57** (1985): 305-309.
4. Rosenberg, I.M. *Protein Analysis and Purification*, Birkhäuser, 2005: 41-47.

For *in vitro* research use only