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Polyclonal Antibody to 6xHistidine Epitope Tag (HHHHHH) - IRDYE700DX

Alternate names: 6xHis-Tag, HHHHHH Tag, HIS6 Tag, His Tag

Catalog No.: R1181D7

Quantity: 0.1 mg

Concentration: 1.0 mg/ml (by UV absorbance at 280 nm)

Background: Epitope tags are short peptide sequences that are easily recognized by tag-specific antibodies. Due to their small size, epitope tags do not affect the tagged proteins biochemical properties. Most often, sequences encoding the epitope tag are included with target DNA at the time of cloning to produce fusion proteins containing the epitope tag sequence. This allows anti-epitope tag antibodies to serve as universal detection reagents for any tag-containing protein produced by recombinant means. This means that anti-epitope tag antibodies are a useful alternative to generating specific antibodies to identify, immunoprecipitate or immunoaffinity purify a recombinant protein. The anti-epitope tag antibody is usually functional in a variety of antibody-dependent experimental procedures. Expression vectors producing epitope tag fusion proteins are available for a variety of host expression systems including bacteria, yeast, insect and mammalian cells.

Host: Rabbit

Immunogen: 6X His epitope tag peptide H-H-H-H-H-H conjugated to KLH using maleimide.

Format:
State: Lyophilized purified Ig fraction.
Purification: Affinity Chromatography.
Buffer System: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 containing 10 mg/ml BSA as stabilizer and 0.01% (w/v) Sodium Azide as preservative.
Label: IRDYE700DX – IRDye® 700DX (MW 1954)
Absorption / Emission: 689 nm / 700 nm
Molar Ratio: 1.1 moles IRDye® 700DX per mole of Rabbit IgG
Reconstitution: Restore with 0.1 ml of deionized water (or equivalent).

Applications: Fluorescence technology is widely used to detect proteins. However, many common visible fluorophores often result in considerable background fluorescence in the visible range. Visible fluorophores are rarely used for membrane-based protein detection because of this high background. IRDye® 800 and IRDye® 700DX antibody and reagent conjugates are specifically designed for protein detection methods that use longer-wavelength, near-infrared (IR) fluorophores to visualize proteins in western blotting and other applications. Very low background fluorescence in the IR range provides for a much higher signal-to-noise ratio than visible fluorophores. Detection levels in the picogram range on Western blots rival the sensitivity of chemiluminescence on film. IRDye® 800 conjugates are optimized for the Odyssey® Infrared Imaging System developed by LI-COR. IRDye® 800 conjugates are also suitable for immunofluorescence microscopy using commercially

available excitation/emission filters in the 780nm/820nm range. Dual simultaneous labeling in western blots or microscopy is achieved when IRDye® 800 conjugates are used in conjunction with IRDye® 700DX or DyLight(TM)680 conjugates. IRDye® 800 and IRDye® 700DX conjugates provide an ultra-sensitive and convenient alternative to standard chemiluminescent protein detection methods, as well as a valuable tool for multicolor imaging.
LI-COR Odyssey(R) BLOT: 1/2,500-1/5,000.
LI-COR In-Cell Western(R): 1/800-1/1,200.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: This antibody is directed against the 6X His motif.
This polyclonal anti-6X His tag antibody detects over-expressed proteins containing the 6X His epitope tag. To date, this antibody has reacted with all His tagged proteins so far tested. In western blotting of bacterial extracts, the antibody does not cross-react with endogenous proteins. The antibody recognizes the His tag fused either to the amino- or carboxy- termini of targeted proteins.

Storage: Prior to reconstitution store at 2-8°C.
Following reconstitution store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings:
1. Bayer & Wilchek, Methods in Enzymology, 184; 138-160, 1990.