

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human BMPR-IA in direct ELISAs and Western blots. In direct ELISAs, approximately 15% cross-reactivity with recombinant mouse BMPR-IA is observed, and less than 5% cross-reactivity with recombinant human (rh) BMPR-IB and rhBMP RII is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human BMPR-IA/ALK-3 Gln24-Arg152 Accession # P36894
Conjugate	Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.

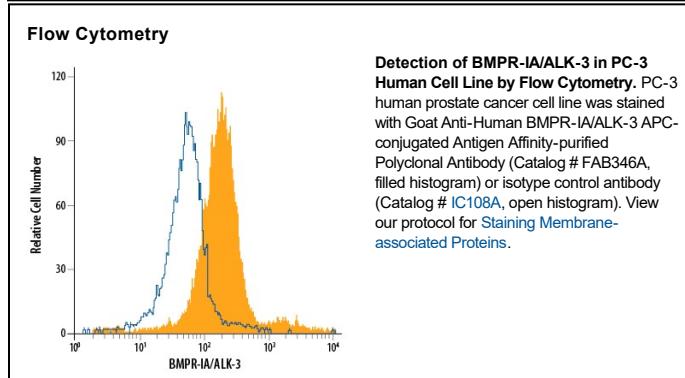
*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Flow Cytometry	10 µL/10 ⁶ cells	See Below

DATA



PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Cellular responses to bone morphogenetic proteins (BMPs) have been shown to be mediated by the formation of hetero-oligomeric complexes of the type I and type II serine/threonine kinase receptors. BMP receptor 1A (BMPR-1A), also known as activin receptor-like kinase (ALK)-3, is one of seven known type I serine/threonine kinases that are required for the signal transduction of TGF-β family cytokines. In contrast to the TGF-β receptor system in which the type I receptor does not bind TGF-β in the absence of the type II receptor, type I receptors involved in BMP signaling (including BMPR-IA, BMPR-IB/ALK-6, and ActR-I/ALK-2) can independently bind the various BMP family proteins in the absence of type II receptors. Recombinant soluble BMPR-IA binds BMP-4 with high-affinity in solution and is a potent BMP-4 antagonist *in vitro*. BMPR-IA is ubiquitously expressed during embryogenesis. In adult tissues, BMPR-IA mRNA is also widely distributed with the highest expression levels found in skeletal muscle. The extracellular domain of BMPR-IA shares little amino acid sequence identity with the other mammalian ALK type I receptor kinases, but the cysteine residues are conserved. Human and mouse BMPR-IA are highly conserved and share 98% sequence identity.

References:

1. Kawabata, M. et al. (1998) Cytokine and Growth Factor Reviews 9:49.
2. Ebendal, T. et al. (1998) J. Neuroscience Research 51:139.