

DESCRIPTION

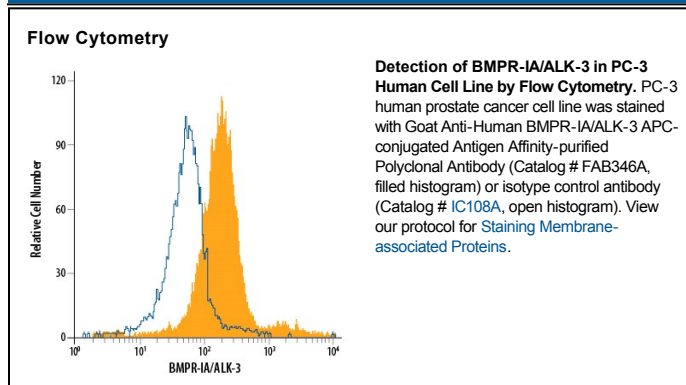
Species Reactivity	Human
Specificity	Detects human BMPR-1A in direct ELISAs and Western blots. In direct ELISAs, approximately 15% cross-reactivity with recombinant mouse BMPR-1A is observed, and less than 5% cross-reactivity with recombinant human (rh) BMPR-1B and rhBMP RII is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human BMPR-1A/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 μ L/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. ● 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-1A, BMPR-1B/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-1A binds BMP-4 with high-affinity in solution and is a potent BMP-4 antagonist *in vitro*. BMPR-1A is ubiquitously expressed during embryogenesis. In adult tissues, BMPR-1A mRNA is also widely distributed with the highest expression levels found in skeletal muscle. The extracellular domain of BMPR-1A 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-1A 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.