

BMP receptor-1A, soluble Active Protein | BMP receptor-1A active protein

Human BMP receptor-1A, soluble

CATALOG # AAA79169	HOST Insect Cells	REACTIVITY Human
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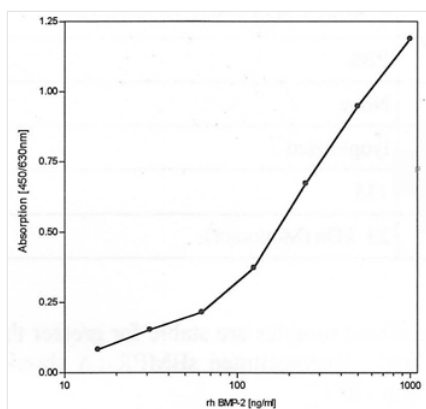
PRODUCT SYNONYMS

BMP receptor-1A; soluble; Human BMP receptor-1A; Recombinant Human Soluble BMP Receptor Type-1A; Bone morphogenetic protein receptor type-1A; Activin receptor-like kinase 3; CD292; BMP receptor-1A active protein

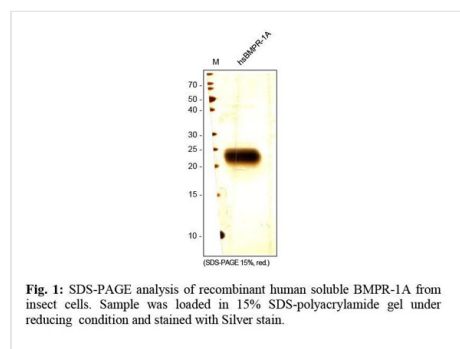
PRODUCT SPECIFICATIONS

Host	Insect Cells
Reactivity	Human
Purity/Purification	> 90% by SDS-PAGE & silver stain
Form/Format	Lyophilized
Sequence	QNLD SMLHGT GMKSDSDQKK SENGVTLAPE DTLPLKCYC SGHCPDDAIN NTCITNGHCF AIIEEDDQGE TTLASGCMKY EGSD FQCKDS PKAQLRR TIE CCRTNLCNQY LQPTLPVVI GPFFDGSIRH HHHHH
Sequence Length	135
Buffer	PBS
Reconstitution	The lyophilized sBMPR-1A is soluble in water and most aqueous buffers and should be reconstituted in PBS or medium to a concentration not lower than 50ug/ml.
Biological Activity	Measured by its ability to inhibit recombinant human BMP-2 induced alkaline phosphatase production by C2C12 myogenic cells. The ED ₅₀ for this effect is typically 1-4 ug/ml in the presence of 500ng/ml of recombinant human BMP-2.
Preparation and Storage	Lyophilized samples are stable for greater than six months at -20 degree C to -70 degree C. Reconstituted sBMPR-1A should be stored in working aliquots at -20 degree C.

IMAGES



Application Data



Application Data

BMP-2 BioLISA using recombinant human soluble BMPR-1A for capturing and recombinant human BMP-2 as standard. A rabbit anti-human BMP-2 antibody in combination with an goat anti-rabbit Biotin antibody was used for detection.

ADDITIONAL INFORMATION

Related Product Information for BMP receptor-1A active protein	The extracellular domain of human BMPR-1A was fused with a carboxy-terminal 6X histidine-tag. The monomeric glycoprotein was expressed in baculovirus infected insect cells. 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 a one of seven known type I serine/threonine kinases that are required for the signal transduction of TGF-b family cytokines. In contrast to the TGF-b receptor system in which the type I receptor does not bind TGF-b 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-2 and -4 with high-affinity in solution and is a potent BMP-2/4 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.
Product Categories/Family for BMP receptor-1A active protein	Soluble receptors
References	1. Wu MY and CS Hill Dev Cell 16:329, 2009 2. Nickel J et al, Cytokine Growth Factor Rev 20:367, 2009 3. de Caestecker M, Cytokine Growth Factor Rev 15:1, 2004 4. Schmal H et al, Cytotherapy 14(7):868-76, 2012 5. Liu R et al, BMC Musculoskelet Disord 15;10:51, 2009

NCBI AND UNIPROT INFORMATION

NCBI GI #	41349437
NCBI GeneID	657
NCBI Accession #	NP_033888
NCBI GenBank Nucleotide #	NM_009758
UniProt Accession #	P36894 ; Q8NEN8 ; A8K6U9
Molecular Weight	23 kDa (Monomer)
NCBI Official Full Name	bone morphogenetic protein receptor type-1A
NCBI Official Synonym Full Names	bone morphogenetic protein receptor, type 1A
NCBI Official Symbol	BMPR1A
NCBI Official Synonym Symbols	ALK3; SKR5; CD292; ACVRLK3; 10q23del
NCBI Protein Information	bone morphogenetic protein receptor type-1A; ALK-3; BMPR-1A; BMP type-1A receptor; activin receptor-like kinase 3; activin A receptor, type II-like kinase 3; serine/threonine-protein kinase receptor R5
UniProt Protein Name	Bone morphogenetic protein receptor type-1A
UniProt Gene Name	BMPR1A
UniProt Synonym Gene Names	ACVRLK3; ALK3; BMP type-1A receptor; BMPR-1A; ALK-3; SKR5
UniProt Entry Name	BMR1A_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.