

Active Recombinant Human Bone Morphogenetic Protein Receptor, Type IA

Cat. No. BMPR1A-4130H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	BMPR1A Human Recombinant produced in HEK-293 cells is a single, glycosylated, polypeptide chain containing 369 amino acids with a molecular weight of 43.7 kDa though on SDS-PAGE migrates at about 50 kDa due to the glycosilation. The BMPR1A is purified by proprietary chromatographic techniques.
Species	Human
Source	Human
Description	The bone morphogenetic protein (BMP) receptors are a family of transmembrane serine/threonine kinases that include the type I receptors BMPR1A and BMPR1B and the type II receptor BMPR2. These receptors are also closely related to the activin receptors, ACVR1 and ACVR2. The ligands of these receptors are members of the TGF-beta superfamily.
Form	The BMPR1A protein was lyophilized from a 0.2µm filtered solution containing no additives or preservatives.
Purity	Greater than 95.0% as determined by SDS-PAGE.
Bio-activity	The biological activity of human BMPR1A is determined by its ability to inhibit human BMP-4 induction of alkaline phosphatase in the mouse chondrogenic cell line ATDC5. The observed ED50 range is from 0.1 to 0.3 µg/ml in the presence of 30ng/ml of recombinant human BMP-4 protein.

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Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Solubility	It is recommended to reconstitute the lyophilized BMPR1A in sterile 18MΩ-cm H ₂ O not less than 100g/ml, which can then be further diluted to other aqueous solutions.
Amino acid sequence	QNLDSMLHGT GMKSDSDQKK SENGVTLAPE DTLPFLKCYC SGHCPDDAIN NTCITNGHCF AIIEEDDQGE TTLASGCMKY EGSDFQCKDS PKAQLRRTIE CCRTNLCNQY LQPTLPPVVI GPFFDGSIRE NLYFQGGSGT KLDKTHTCPP CPAPPELLGGP SVFLFPPKPK DTLMISRTPE VTCVVVDVSH GDPEVKFNWY VDGVEVHNAK TKPREEQYNS TYRVS SVLTV LHQDWLNGKE YKCKVSNKAL PAPIEKTISK AKGQPREPQV YTLPPSRDEL TKNQVSLTCL VKGFYPSDIA VEWESNGQPE NNYKTTTPVL DSDGSFFLYS KLTVDKSRWQ QGNVFSCSVM HEALHNHYTQ KSLSLSPGK.
Storage	Lyophilized BMPR1A although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution BMPR1A should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.
GENE INFORMATION	
Gene Name	BMPR1A bone morphogenetic protein receptor, type IA [Homo sapiens]
Official Symbol	BMPR1A
Synonyms	BMPR1A; bone morphogenetic protein receptor, type IA; ALK3; SKR5; CD292; ACVRLK3; 10q23del; OTTHUMP00000020014; activin A receptor, type II-like kinase 3; serine/threonine-protein kinase receptor; Bone morphogenetic protein receptor type-1A; EC 2.7.11.30; Serine/threonine-protein kinase receptor R5; Activin receptor-

	like kinase 3; ALK-3
Gene ID	657
mRNA Refseq	NM_004329
Protein Refseq	NP_004320
MIM	601299
UniProt ID	P36894
Chromosome Location	10q22.3
Pathway	Cytokine-cytokine receptor interaction; TGF-beta signaling pathway; Signaling by BMP
Function	ATP binding; SMAD binding; magnesium ion binding; nucleotide binding; protein homodimerization activity; protein serine/threonine kinase activity; receptor activity; transferase activity; transforming growth factor beta receptor activity
PDB rendering based on 1es7.	