



Bone Morphogenetic Protein Receptor-1A, His Tag, human recombinant (rHuBMPR-1A-His)

Catalog No: 94963
Lot No: XXXXX
Source: Insect cells
Synonyms: BMPR-1A, BMP-R1A, BMPR1A, BMR1A, CD292, CD-292, Serine/threonine-protein kinase receptor R5, SKR5, Activin receptor-like kinase 3, ALK-3, ACVRLK3, EC 2.7.11.30, CD292 antigen

Background

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. TGF-betas and activins transduce their signals through the formation of heteromeric complexes with 2 different types of serine (threonine) kinase receptors: type I receptors of about 50-55 kD and type II receptors of about 70-80 kD. Type II receptors bind ligands in the absence of type I receptors, but they require their respective type I receptors for signaling, whereas type I receptors require their respective type II receptors for ligand binding.

Description

BMPR1A human recombinant extracellular domain produced in baculovirus is a monomeric, glycosylated, polypeptide chain fused with 6xHis Tag at C-terminus and having a molecular mass of 23 kDa. BMR1A is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

CD292 was lyophilized from a concentrated (1 mg/ml) sterile solution containing 1X PBS.

Solubility

It is recommended to reconstitute the lyophilized ALK-3 in sterile PBS not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized Bone Morphogenetic Protein Receptor 1A, 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.

Purity

Greater than 90.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Activity

Measured by its ability to inhibit recombinant human BMP-2 induced alkaline phosphatase production by C2C12 myogenic cells. The ED50 for this effect is typically 1 - 3 µg/ml in the presence of 500 ng/ml of recombinant human BMP-2 corresponding to a specific activity of 2,000 units/mg.

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