



## PRODUCT DATA SHEET

**Product:** Bone Morphogenetic Protein Receptor Type IA (BMPR1A),  
(human recombinant)

**Cat. No.:** BP-026 (10 µg)

**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 two different types of serine (threonine) kinase receptors: type I receptors of about 50-55 kDa and type II receptors of about 70-80 kDa. 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:**

Human recombinant BMPR1A extracellular domain produced in baculovirus is a monomeric, glycosylated, polypeptide chain fused with 6X His tag at the C-terminus.

**Molecular Weight:**

23 kDa

**Format:**

White lyophilized powder from a concentrated (1 mg/mL) sterile solution containing 1X PBS. Recombinant human BMPR1A is purified by proprietary chromatographic techniques.

**Reconstitution:**

It is recommended to reconstitute the lyophilized recombinant human BMPR1A in sterile PBS at not less than 100 µg/mL, which can then be further diluted to other aqueous solutions.

**Storage:**

Lyophilized protein is stable for at least 3 weeks at room temperature. Long term storage should be below -18°C, desiccated. Upon reconstitution, human recombinant 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). Aliquot to avoid freeze/thaw cycles.

**Purity:**

>90% determined by RP-HPLC, and SDS-PAGE.

**Biological Activity:**

Measured by its ability to inhibit recombinant human BMP-2 induced alkaline phosphatase production by C2C12 myogenic cells. The ED<sub>50</sub> for this effect is typically 1-3 µg/mL in the presence of 500 ng/mL of recombinant human BMP-2.

**Limitations:**

For *in vitro* research use only. Not for use in diagnostics or in humans.

**Warranty:**

No warranties, expressed or implied, are made regarding the use of this product. KAMIYA BIOMEDICAL COMPANY is not liable for any damage, personal injury, or economic loss caused by this product.