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**Product Data Sheet**


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Product Name: BMPR1A Human, CHO  
 Cat. No.: GP20096  
 Batch No.: 1

**Product Data**

Purity	>98%	Source	CHO cells.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	BMPR-1A; BMP-R1A; BMPR1A; BMR1A; CD292; CD-292; Serine/threonine-protein kinase receptor R5; SKR5; ALK-3; ACVRLK3; EC 2.7.11.30; CD292 antigen.		
Amino Acid Sequence	QNLDSMLHGT GMKSDSDQKK SENGVTLAPE DTLPFLKCYC SGHCPDDAIN NTCITNGHCF AII EEDDQGE TTLASGCMKY EGSDFQCKDS PKAQLRRTIE CCRTNLCNQY LQPTLPPVVI GPFDDGSIRI EGRMDDKTHT CPPCPAPELL GGPSVFLFPP KPKDTLMISR TPEVTCVVVD VSHEDPEVKF NWWVDGVEVH NAKTKPREEQ YNSTYRVVSV LTVLHQDWLN GKEYKCKVSN KALPAPIEKT ISKAKGQPRE PQVYTLPPSR DELTKNQVSL TCLVKGFYPS DIAVEWESNG QPENNYKTTP PVLDSGDGSFF LYSKLTVDKS RWQQGNVFSC SVMHEALHNN YTQKSLSLSP GK.		
Solubility	It is recommended to reconstitute the lyophilized BMPR1A in sterile 18MΩ-cm H <sub>2</sub> O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	The protein was lyophilized from a sterile (0.2μm) filtered solution containing PBS.		

**Introduction**

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 receptors, ACVR1 and ACVR2. The ligands of these receptors are members of the TGF-beta superfamily. TGF-betas 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

**Caution: Product has not been fully validated for medical applications. For research use only.**

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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.

### Biological Activity

The ED50, as calculated by the inhibition of human BMP-4-induced alkaline phosphatase production caused by ATDC5 cells is 120ng/ml corresponding to a specific activity of  $8.3 \times 10^3$  units/mg.

### Stability

Lyophilized BMPR1A although stable at room temperature for 3 weeks, should be stored desiccated below  $-18^{\circ}\text{C}$ . Upon reconstitution BMPR1A should be stored at  $4^{\circ}\text{C}$  between 2-7 days and for future use below  $-18^{\circ}\text{C}$ . Please prevent freeze-thaw cycles.

### Background

Bone Morphogenetic Protein Receptor-1A Human Recombinant produced in CHO cells is a glycosylated homodimer chain containing 2x362 amino acids and having a total molecular mass of 80.8kDa. BMPR1A is purified by proprietary chromatographic techniques.

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