

Recombinant Human Bone Morphogenetic Protein Receptor, Type IB

Cat. No. BMPR1B-1589H Lot. No. (See product label)

SPECIFICATION

Species Human

Source Mammalian Cells

Description


Bone morphogenetic proteins (BMP) are members of the transforming growth factor beta (TGF-beta) superfamily and are involved in a wide variety of biological processes, including osteoblast differentiation and bone healing. The activities of the BMP are mediated by signal transduction via three BMP receptors (BMPR-IA, -IB and -II), which are thus essential for the biological actions of the BMP. Although the precise mechanisms which control the BMPR are not yet known, it is possible that post-translational regulation of these cell surface antigens by shedding could modulate their expression and thereby at least partly determine the response of the cells to the BMP. The BMPR1B receptor plays a role in the formation of middle and proximal phalanges. BMPR1B has also been designated as CDw293. 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. Human and mouse BMPR-IB are highly conserved and share 98% sequence identity.

State Of Matter Lyophilized.

Purity >90% by SDS Page and analyzed by silver stain.

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Endotoxin	<1.0 EU/g as determined by the LAL method.
Molecular Weight	The predicted molecular weight of Recombinant Human BMPR-IB is Mr 40 kDa. However, the actual molecular weight as observed by migration on SDS Page is Mr 50-55 kDa.
Storage And Stability	This lyophilized protein is stable for six to twelve months when stored desiccated at -20°C to -70°C. After aseptic reconstitution, this protein may be stored at 2°C to 8°C for one month or at -20°C to -70°C in a manual defrost freezer. Avoid Repeated Freeze Thaw Cycles.

GENE INFORMATION

Gene Name	BMPR1B bone morphogenetic protein receptor, type IB [Homo sapiens]
Synonyms	bone morphogenetic protein receptor, type IB; ALK6; ALK-6; CDw293; BMPR1B; OTTHUMP00000161622; activin receptor-like kinase 6; serine/threonine receptor kinase; EC 2.7.11.30; OTTHUMP00000161622; CDw293 antigen
Gene ID	658
mRNA Refseq	NM_001203
Protein Refseq	NP_001194
MIM	603248
UniProt ID	O00238
Chromosome Location	4q22-q24

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Pathway

Cytokine-cytokine receptor interaction; TGF-beta signaling pathway

Function

transforming growth factor beta receptor activity, type I; ATP binding; SMAD binding; magnesium ion binding; manganese ion binding; nucleotide binding; receptor activity; transferase activity

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