

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived				
	Met	Human Activin RIIIB (Ser19 - Thr 134) Accession # CAA54671	IEGRMD	Human IgG ₁ (Pro100 - Lys330)	6-His tag
	N-terminus			C-terminus	

N-terminal Sequence Met

Analysis

Structure / Form Disulfide-linked homodimer

Predicted Molecular Mass 41 kDa (monomer)

SPECIFICATIONS

SDS-PAGE	60 kDa, reducing conditions
Activity	Measured by its ability to inhibit Activin A-induced hemoglobin expression in K562 human chronic myelogenous leukemia cells. Schwall, R.H. <i>et al.</i> (1991) <i>Method Enzymol.</i> 198 :340. Approximately 0.3-1 µg/mL of rhActivin RIIIB/Fc Chimera will inhibit 50% of the biological response due to 3 ng/mL of rhActivin A.
Endotoxin Level	<0.01 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 200 µg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Activin isoforms and other members of the TGF-β superfamily exert their biological effects by binding to heteromeric complexes of a type I and a type II serine-threonine kinase receptor, both of which are essential for signal transduction. Seven type I and five type II receptors, including the two type I and the two type II activin receptors, designated ActR-I(A), ActR-IB, ActR-II(A) and ActR-IIB, have been cloned from mammals. Through alternative mRNA splicing, multiple ActR-IIB isoforms can also be generated, adding to the complexity of the activin receptor system. Different activin isoforms bind with different high-affinities to the various type II isoforms. Type I activin receptors do not bind directly to activin, but will associate with the type II receptor-activin complex and initiate signal transduction. Besides the activin isoforms, ActR-II will also bind inhibin, BMP-2 and BMP-7 with lower affinities. ActR-I can also bind and form signaling complexes with the BMP-2/7-bound BMPRII. Activin type II receptors are highly conserved. Human, mouse and rat type II activin receptors share greater than 98% amino acid sequence homology. Recombinant soluble activin type II receptors bind activin with high affinity, and are potent activin antagonists.

References:

1. Attisano, L. *et al.* (1996) *Mol. and Cell Biol.* **16**:1066.
2. Woodruff, T.K. (1998) *Biochem. Pharmacology* **55**:953.