

Recombinant Human Activin A Receptor, Type I

Cat. No. ACVR1-1408H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human Activin A Receptor, Type I was expressed in <i>Insect cells</i> . MW=26 kDa.
Species	Human
Source	Insect Cells
Description	Human Activin A is a 26.0 kDa disulfide-linked homodimer of two β A chains, each containing 116 amino acid residues, belonging to the TGF- β family. It exhibits a wide range of biological activity including regulation of cellular proliferation and differentiation, and promotion of neuronal survival. Elevated levels of Activin A in human colorectal tumors and in postmenopausal women have been implicated in colorectal and breast cancers, respectively. The biological activities of Activin A can be neutralized by inhibins and by the diffusible TGF- β antagonist, follistatin.
Specific Activity	$\geq 5 \times 10^5$ U/mg.
Product Format	Sterile filtered, lyophilized.
Stabilizer	None.
Purity	>95% (SDS-PAGE, HPLC).
Endotoxin Level	<0.1 ng/ μ g (1 EU/ μ g).

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Buffer	Citric acid (10 mM, pH 3.0).
Biological Activity	The ED ₅₀ of ≤2 ng/mL was determined by its ability to inhibit the proliferation of mouse MPC-11 cells. It corresponds to a specific activity of ≥5×10 ⁵ U/mg.
Reconstitution	We recommend a quick spin followed by reconstitution in deionized sterile-filtered water to a concentration of 50µg/mL. This solution can be stored at 4°C for 1 month or at –20°C for future use. It is recommended that further dilutions be made in PBS containing 2 mg/mL albumin and stored at –20°C.
Storage	The lyophilized protein is stable for a few weeks at room temperature, but best stored at –20°C for at least two years. Reconstituted Human Activin A should be stored in working aliquots at –20°C. Avoid repeated freeze-thaw cycles.

GENE INFORMATION

Gene Name	ACVR1 activin A receptor, type I [Homo sapiens]
Synonyms	ACVR1; activin A receptor, type I; FOP; ALK2; SKR1; TSRI; ACTRI; ACVR1A; ACVRLK2; OTTHUMP00000204604; OTT HUMP000002 04626; hydroxyalkyl-protein kinase; TGF-B superfamily receptor type I; activin A receptor, type II-like kinase 2; serine/threonine-protein kinase receptor R1; EC 2.7.11.30
Gene ID	90
mRNA Refseq	NM_001105
Protein Refseq	NP_001096
MIM	102576

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UniProt ID	Q04771
Chromosome Location	2q23-q24
Pathway	Cytokine-cytokine receptor interaction; TGF-beta signaling pathway
Function	ATP binding; SMAD binding; activin binding; activin receptor activity, type I; follistatin binding; gnesium ion binding; manganese ion binding; nucleotide binding; protein homodimerization activity; receptor activity; transferase activity; transforming growth factor beta binding

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