

## Active Recombinant Human Activin A, His-tagged

Cat. No. Activin A-15H Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	recombinant Human Activin A was produced by transient expression in Nicotiana plant.
<b>Species</b>	Human
<b>Source</b>	Nicotiana
<b>Description</b>	Activin A is a non-glycosylated cytokine that belongs to the TGF $\beta$ superfamily. It is involved in a wide variety of biological processes including hematopoiesis, immune response, neural cell differentiation, wound repair and morphogenesis. The Activins form homodimers (e.g. AA; BB) and heterodimers (e.g. AB) and can activate the Smad pathway by signaling through heterodimeric typeI/typeII serine/threonine kinase transmembrane receptors. Activins are also important for production and regulation of several hormones such as FSH, Prolactin, ACTH and oxytocin. Activin A is synthesized by a wide spectrum of cells including bone marrow cells, skin cells, vascular smooth muscle cells and cells of the reproductive system.
<b>Form</b>	Lyophilized from Tris HCl at pH 7.4.
<b>Bio-activity</b>	Bioactivity is assayed by measuring the ability of recombinant human Activin A to inhibit proliferation of mouse plasma-cytoma cell line (MPC-11). The ED50 value for this effect is typically below 5 ng/ml.
<b>Molecular Mass</b>	Dimer of 27,4 kDa. Recombinant human Activin A contains two protein chains of 116 amino acids each and a 6 aa Histidine-based tag for a total length of 122 aa.

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<b>Endotoxin</b>	Endotoxin level is less than 0.05 EU/ug as measured by LAL method.
<b>Purity</b>	Greater than 95% by SDS page analysis.
<b>Storage</b>	The lyophilized protein, though stable at 2-8°C in the short term, is best stored at -20°C. Reconstituted protein should be used immediately or stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.
<b>Reconstitution</b>	Lyophilized protein should be reconstituted in water to a suggested concentration of 25 µg/ml. Due to the protein nature, dimers and multimers may be observed. Not recommended to reconstitute in higher concentration than 25 µg/ml. At higher concentration the solubility may be reduced and multimers generated. Optimal concentration should be determined for specific application and cell lines.

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