

## GFH6 Recombinant Human Activin A

### Description

Activin A is a member of the Transforming Growth Factor  $\beta$  (TGF- $\beta$ ) family of proteins with a wide range of biological activities. Activins are produced in many tissue types including the skin, gonads, lungs, and pituitary gland. Activins interact with receptor type I and type II serine/threonine protein kinases, to activate SMAD signaling and regulate diverse cellular functions, such as cell proliferation, differentiation, wound healing, apoptosis, and metabolism. Activin A is a homodimer comprised of two activin  $\beta$  A chains. Human Activin A shares 100% amino acid sequence identity with mouse, rat, porcine, bovine, and feline Activin A proteins.

<b>Length</b>	110 aa
<b>Molecular Weight</b>	24.4 kDa
<b>Source</b>	E. coli
<b>Accession Number</b>	P08476
<b>Purity</b>	$\geq 95\%$ determined by reducing and non-reducing SDS-PAGE

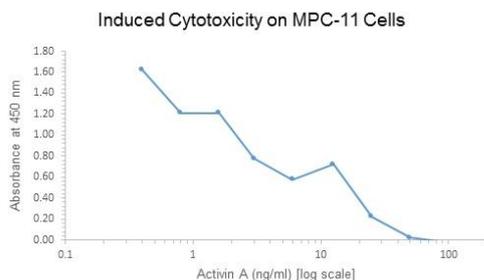
### Specifications

<b>Alternative Names</b>	Inhibin $\beta$ -1, FRP, FSH-releasing protein, EDF, erythroid differentiation factor, FRP, follicle stimulating hormone releasing protein, Activin-A
<b>Biological Activity</b>	Human Activin A is fully biologically active when compared to standard. The activity is determined using MPC-11 cells and it is typically 1.6 - 3.1 ng/ml. In addition to the standard assay, the activity of this product has been verified in the lab of Dr Josué Mfopou Kunjom (VUB - Diabetes Research Centre) - by analysis of CXCR4 in definitive endoderm.
<b>Endotoxin Level</b>	$\leq 1.00$ EU/ $\mu$ g as measured by kinetic LAL
<b>Formulation</b>	Lyophilized from a sterile (0.2 micron) filtered aqueous solution containing 0.1% Trifluoroacetic Acid (TFA)
<b>AA Sequence</b>	MGNICAKKQF FVSEFKDIGWN DWIIPSGYH ANYCEGECPS HIAGTSGSSL SFHSTVINHY RMRGHSPFAN LKSCCVPTKL RPMSMLYYDD GQNIKKDIQ NMIVEECGCS

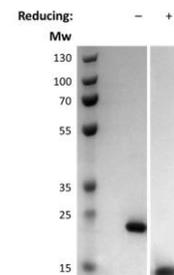
### Preparation and Storage

<b>Reconstitution</b>	Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at 0.1 mg/ml, which can be further diluted into other aqueous solutions.
<b>Stability and Storage</b>	12 months from date of receipt when stored at $-20^{\circ}\text{C}$ to $-80^{\circ}\text{C}$ as supplied. 1 month when stored at $4^{\circ}\text{C}$ after reconstituting as directed. 3 months when stored at $-20^{\circ}\text{C}$ to $-80^{\circ}\text{C}$ after reconstituting as directed.

### Data



Cytotoxicity assay for Human Activin A. Cell viability was measured to calculate the ED50.



Non-reducing (-) and reducing (+) conditions in a 4 - 20% Tris-Glycine gel stained with Coomassie Blue. 5  $\mu$ g of protein was loaded in each lane. Human Activin A has a predicted Mw of 24.4 kDa.