

GFR6AF Recombinant Rat Activin A (Animal-Free)

Description

Activin A is a member of the Transforming Growth Factor β (TGF- β) 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 β A chains. Rat Activin A shares 100% amino acid sequence identity with human, mouse, porcine, bovine, and feline Activin A proteins.

This product is produced with no animal derived raw products. All processing and handling employs animal free equipment and animal free protocols.

Length	117 / 234 aa
Molecular Weight	13.1 / 26.2 kDa
Source	E. coli
Accession Number	P18331
Purity	$\geq 95\%$ determined by reducing and non-reducing SDS-PAGE

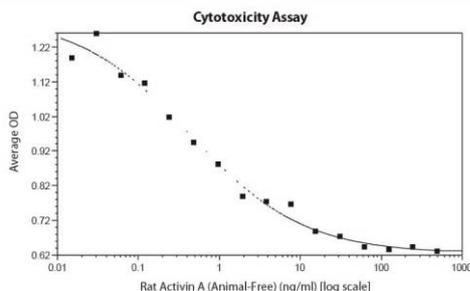
Specifications

Alternative Names	Inhibin β -1, FRP, FSH-releasing protein, EDF, erythroid differentiation factor, FRP, follicle stimulating hormone releasing protein, Activin-A
Biological Activity	Rat Activin A is fully biologically active when compared to standard. The activity is determined by using a cytotoxicity assay using MPC-11 cells and it is typically less than 10 ng/ml. This corresponds to an expected specific activity of 1×10^5 units/mg.
Endotoxin Level	≤ 1.00 EU/ μ g as measured by kinetic LAL
Formulation	Lyophilized from a sterile (0.2 micron) filtered aqueous solution containing 0.1% Trifluoroacetic Acid (TFA)
AA Sequence	MGLECDGKVN ICCKKQFFVS FKDIGWNDWI IAPSGYHANY CEGECP SHIA GTSGSSLSFH STVINHYRMR GHSPFANLKS CCVPTKLRPM SMLYYDDGQN IIKKDIQNM I VEECGCS

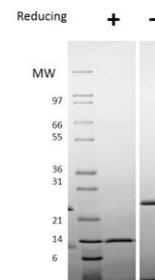
Preparation and Storage

Reconstitution	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.
Stability and Storage	12 months from date of receipt when stored at -20°C to -80°C as supplied. 1 month when stored at 4°C after reconstituting as directed. 3 months when stored at -20°C to -80°C after reconstituting as directed.

Data



Cytotoxicity assay for Rat Activin A. Cell viability was measured to calculate the ED50, which is less than 10 ng/ml.



Non-reducing (-) and reducing (+) conditions in a 4 - 20% Tris-Glycine gel stained with Coomassie Blue. 1 μ g of protein was loaded in each lane. Human Activin A has a predicted Mw of 26.2 kDa (each monomer is 13.1 kDa).