

**BACKGROUND:**

Activin A is a member of the transforming growth factor beta (TGF-β) family of proteins and functions to stimulate follicle-stimulating hormone (FSH) secretion. 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 βA chains. Cleavage of the N-terminal propeptide renders the activin protein biologically active. Human activin A shares 100% amino acid sequence identity with mouse, rat, porcine, bovine, and feline activin A proteins.

Recombinant human Activin A is a non-glycosylated protein dimer, containing 117/234 amino acids and having a molecular mass of 13.1/26.2 kDa.

**Cat. No.:**  
RP1043

**Alternate Names:**  
Inhibin beta-1, FRP, FSH-releasing protein

**AA Sequence:**

MGLECDGKVN	ICCKKQFFVS	FKDIGWNDWI
IAPSGYHANY	CEGECPSHIA	GTSGSSLSFH
STVINHYRMR	GHSPFANLKS	CCVPTKLRPM
SMLYDDGQN	IIKKDIQNMI	VEECGCS

**TECHNICAL INFO**

**Source:**  
*E. coli*

**Physical Appearance:**  
Sterile Filtered white lyophilized (freeze-dried) powder.

**Formulation:**  
0.1% Trifluoroacetic Acid (TFA)

**Stability:**  
Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended that a carrier protein (0.1% HSA or BSA) is added for long term 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.

**Protein Content and Purity determined by:**

- UV spectroscopy at 280 nm.
- RP-HPLC calibrated against a known standard.
- Quantitation against a known standard via reducing and non-reducing SDS-PAGE gels.

**Endotoxin Level:**  
Endotoxin level, as measured by LAL analysis, is <0.01ng/ug or <0.1EU/ug.

**Biological Activity:**  
The activity is measured by dose-dependent cytotoxicity of MPC-11 cells, with Bioactivity Acceptance Criteria ED50 at ng/mL.

