

Recombinant Human/Murine/Rat Activin A

#R00190

Size: 10 µg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Activins and Inhibins are TGF- β superfamily cytokines that are involved in tissue morphogenesis and repair, fibrosis, inflammation, neural development, hematopoiesis, reproductive system function, and carcinogenesis. Activin A protects the heart from hypoxic stress and promotes the differentiation of embryonic stem cells into cardiomyocytes. Activins are homodimers or heterodimers of various β subunits (β A, β B, β C, and β E), while Inhibins are heterodimers of a unique α subunit and one of the β subunits. Activin A is a homodimer of two β A chains. Human β A shares 100% amino acid sequence identity with mouse, rat, bovine, porcine, and feline β A. Activin A binds to Activin RIIA which then associates with Activin RIB/ALK-4. Activin A bioactivity is regulated by cell-associated molecules (BAMBI, Betaglycan, and Cripto) and soluble molecules (β 2-Macroglobulin, Follistatin, and FLRG).

AA Sequence

Gly311-Ser426;Accession#P08476

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile 4 mM HCl to a concentration of 0.1-0.5 mg/ml. Further dilutions should be made in appropriately buffered solutions.

Product Specification

Species	Human,Murine,Rat
Source	CHO Cells
Molecular Weight	Apparent molecular mass of 24 kDa in SDS-PAGE under non-reducing conditions, 14 kDa under reducing conditions, a disulfide-linked homodimer of two 116 amino acid glycosylated polypeptide chains.
Purity	> 95 % by SDS-PAGE analyses.
Biological Activity	Measured by its ability to induce hemoglobin expression in K562 human chronic myelogenous leukemia cells. The ED ₅₀ for this effect is 0.2-1.2 ng/mL.The specific activity of Recombinant Human/Murine/Rat Activin A is approximately 1 IU/µg, which is

	calibrated against human Activin A WHO International Standard.
Physical	Sterile Filtered White lyophilized
Appearance	(freeze-dried) powder.
Formulation	Lyophilized from 0.2 µm filtered concentrated solution in 30 % acetonitrile and 0.1 % TFA.
Endotoxin	Less than 0.01 EU/µg of rHu/Mu/RtActivin A as determined by LAL method.