Datasheet

Cat. No. P1231

Recombinant Human/Murine/Rat Activin A

Information

Gene ID	
Accession #	P08476
Alternate Names	
Source	*Chinese Hamster Ovary cell line, CHO*
M.Wt	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.
AA Sequence	Gly311 - Ser426; Accession # P08476
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
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.
Formulation	Lyophilized from 0.2 μm filtered concentrated solution in 30 % acetonitrile and 0.1 % TFA.
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.
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.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10 μg
Recombinant Human/Murine/Rat Activin A	10 μg

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- 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.

Quality Control

Purity	> 95 % by SDS-PAGE analyses.
Endotoxin	Less than 0.01 EU/μg of rHu/Mu/RtActivin A as determined by LAL method.

Description

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 (βA, βB, βC, and βE), while Inhibins are heterodimers of a unique α subunit and one of the β subunits. Activin A is a homodimer of two βA chains. Human βA shares 100% amino acid sequence identity with mouse, rat, bovine, porcine, and feline βA. 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 (β2-Macroglobulin, Follistatin, and FLRG).

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