Recombinant Human/Murine/Rat Activin A (rHu/Mu/RtActivin A)

ChemWhat Technical Data Sheet (TDS)

Catalog Number:	108-24
Source:	*Chinese Hamster Ovary cell line, CHO*
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.
Quantity:	10μg/50μg
AA Sequence:	Gly311 - Ser426; Accession # P08476
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 Appearance:	Sterile Filtered White lyophilized (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.
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.
Shipping:	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
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.
Usage:	ChemWhat Limited in UK offers this branded product for research, development or further evaluation purposes. **NOT FOR HUMAN USE**.

Human/Murine/Rat Activin A

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 (β_2-Macroglobulin, Follistatin, and FLRG).