


PRODUCT DESCRIPTION:

Activin A is a member of the transforming growth factor β (TGF- β) superfamily. It has a wide range of biological activities including driving mesoderm induction and regulating the differentiation of many cell types. Activin A has also been shown to be necessary for the maintenance of human embryonic stem cells in the undifferentiated state.¹ It shares receptors with the ligand nodal and activates the same downstream SMAD pathway as TGF- β . Recombinant human mature Activin A is a disulfide-linked homodimer of two 116 amino acid residue β A subunits with a MW of 13 kDa.

Product Information Sheet

CYTOKINES



Version 1.0.0

**Recombinant
Human
ACTIVIN A**

Catalog #02514 5 μ g/vial

SOURCE:

Recombinant protein expressed in Chinese Hamster Ovary (CHO) cells.

PURITY:

Greater than 98% as determined by SDS-PAGE and visualized by silver stain. The endotoxin level is less than 0.1 ng/ μ g (1.0 EU/ μ g) of Activin A.

FORMULATION:

Lyophilized from a sterile-filtered solution in 35% acetonitrile plus 0.1% TFA. No preservatives or carrier proteins are present.

RECONSTITUTION:

Centrifuge vial prior to opening. Reconstitute to a concentration greater than 10 μ g/mL with sterile phosphate buffered saline containing greater than 0.1% human or bovine serum albumin.

STABILITY AND STORAGE:

It is recommended that lyophilized samples are stored desiccated for up to 6 months at -20°C, however samples are stable at room temperature (15 – 25°C) for 2 weeks.

Reconstituted Activin A should be stored at 2 - 8°C for 1 week or for 6 months at -20°C to -80°C.

Avoid repeated freezing and thawing.

ACTIVITY:

The ED₅₀ of Activin A, as measured by its ability to induce hemoglobin expression in K562 cells, is typically 0.5 - 2 ng/mL.

REFERENCES:

1. Xiao L, Yuan X, Sharkis SJ. Activin A maintains self-renewal and regulates fibroblast growth factor, Wnt, and bone morphogenic protein pathways in human embryonic stem cells. *Stem Cells* 24(6):1476-86, 2006

See Material Safety Data Sheet for more information.

**THIS REAGENT IS FOR RESEARCH ONLY.
IT IS NOT TO BE ADMINISTERED TO HUMANS.**

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