

Store at
-20°C

Human/Mouse/Rat Activin A Recombinant Protein

#27313

10 µg

Support: +1-978-867-2388 (U.S.)
www.cellsignal.com/supportOrders: 877-616-2355 (U.S.)
orders@cellsignal.comEntrez-Gene ID #3624
UniProt ID #P08476

New 11/20

For Research Use Only. Not For Use In Diagnostic Procedures.

Background: Activin A is a pleiotropic cytokine that plays an important role in the regulation of the immune response and has been shown to possess both proinflammatory and anti-inflammatory activities (1-3). This cytokine is a member of the TGF- β superfamily known to signal through the Smad- and MAPK-dependent pathways by binding to the activin receptors type I (Alk2, Alk4) and type II (ActRIIA, ActRIIB) (1,2). Activin A is expressed by several cell types, including endothelial cells, mast cells, monocytes, macrophages, and dendritic cells (DCs) (4-6). The effect that Activin A has on the immune response makes it an important cytokine to study when looking at different diseases, such as allergy, autoimmunity, acute and chronic inflammation, and cancer (1,5).

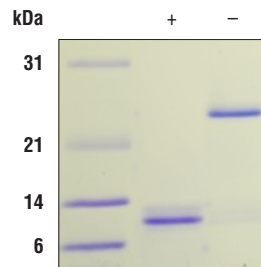
Molecular Weight: 26 kDa

Endotoxin: Endotoxin levels are \leq 1 EU / 1 µg h/m/r Activin A.

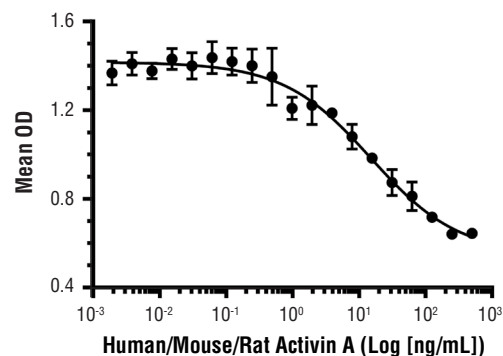
Purity: \geq 95% purity was determined by SDS-PAGE.

Source/Purification: Recombinant human/mouse/rat Activin A was expressed in *E. coli* and is supplied in a lyophilized form.

Bioactivity: The bioactivity of recombinant h/m/r Activin A was determined in an MPC-11 cell cytotoxicity assay. The ED₅₀ of each lot is \leq 10 ng/ml.



The purity of Human/Mouse/Rat Activin A Recombinant Protein was determined by SDS-PAGE of 1 µg reduced (+) and non-reduced (-) recombinant h/m/r Activin A and staining with Coomassie Blue. h/m/r Activin A is a homodimer with a predicted total molecular weight (MW) of 26.2 kDa with each subunit equaling 13.1 kDa.



Serial dilutions of Human/Mouse/Rat Activin A Recombinant Protein were added to MPC-11 cells. Cell cytotoxicity was measured and the linear portion of the curve was used to calculate the ED₅₀.

Storage: Human/Mouse/Rat Activin A Recombinant Protein is supplied as lyophilized material that is very stable at -20°C. It is recommended to reconstitute with sterile water at a concentration of 0.1 mg/ml which can be further diluted in aqueous solutions as needed. Addition of a carrier protein (0.1% HSA or BSA) is recommended for long-term storage.

Background References:

- (1) Morianos, I. et al. (2019) *J Autoimmun* 104, 102314.
- (2) Seeger, P. et al. (2014) *J Immunol* 192, 1241-8.
- (3) Samitas, K. et al. (2016) *Eur Respir J* 47, 769-82.
- (4) Sierra-Filardi, E. et al. (2011) *Blood* 117, 5092-101.
- (5) Hedger, M.P. et al. (2011) *Vitam Horm* 85, 255-97.
- (6) Sozzani, S. and Musso, T. (2011) *Blood* 117, 5013-5.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.