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Recombinant mouse/rat activin A protein (Qk012)



Type: Stem cells

Available for purchase: unit size (µg): 25, 50, 100, 500, 1000

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Product Information

Activin A is a TGF-β family growth factor regulating embryonic development, cell proliferation, differentiation, and immune responses. Activin A is frequently used to maintain pluripotency in induced pluripotent and embryonic stem cell cultures. It is also used in many stem cell differentiation protocols, including endoderm lineage differentiation and further maturation into hepatocyte and pancreatic cells.

Recombinant mouse/rat activin A protein is a high-purity mature bioactive dimer of 26 kDa. It is animal origin-free (AOF), carrier protein-free, and tag-free to ensure its purity with exceptional lot-to-lot consistency.

Alternative protein names

ActA, Activin beta-A chain, Erythroid differentiation protein (EDP), Follicle-Stimulating Hormone (FSH) releasing protein (FRP), INHBA, Inhibin beta A, Inhibin beta 1, Qk12, Qk012

Molecular weight

26 kDa (dimer)

Protein Uniprot number

Bioactive mature domain of recombinant activin A protein, residues 311-426 (Uniprot: Q04998)

Species reactivity

- mouse

- rat
- species similarity:
- human - 100%
- bovine - 100%
- porcine - 100%

Product Information

- >98%, by SDS-PAGE quantitative densitometry
- Expressed in *E. coli*
- Animal origin-free (AOF) and carrier protein-free
- Manufactured in our Cambridge, UK laboratories
- Lyophilized from acetonitrile, TFA

Reconstitution instructions

- Resuspend in 10 mM HCl (Reconstitution solution A) at >50 µg/ml

Featured applications

- Expansion of induced pluripotent, embryonic and mesenchymal stem cells
- Induced pluripotent stem cell culture and maintenance
- iPSC-derived mesoderm differentiation
- Differentiation of iPSC into endoderm
- Expansion and differentiation of mouse pluripotent stem cells

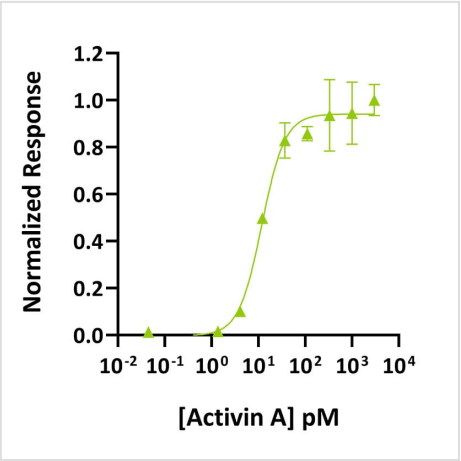
Further quality assays

- Mass spectrometry: single species with expected mass
- Recovery from stock vial: >95%
- Endotoxin: <0.05 EU/µg protein

Scientific Information

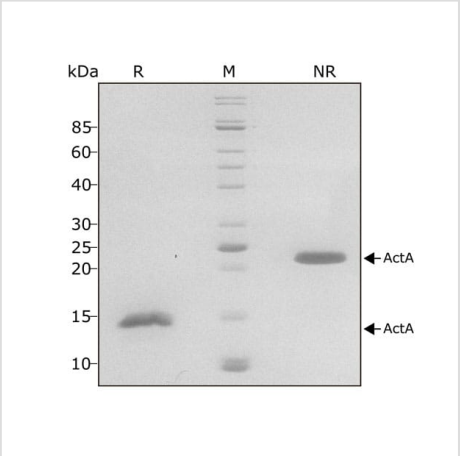
Bioactivity

Activin A activity was determined using the activin-responsive firefly luciferase reporter assay in transiently transfected HEK293T cells. Cells were treated in triplicate with a serial dilution of activin A. Firefly luciferase activity was measured and normalized. EC50 = 11.9 pM (309.4 pg/ml).



Purity

Activin A migrates as a single band at 24 kDa in non-reducing (NR) and 13 kDa as a single monomeric species upon reduction (R). No contaminating protein bands are visible. Purified recombinant protein (7 µg) was resolved using 15% w/v SDS-PAGE in reduced (+β-mercaptothanol, R) and non-reduced conditions (NR) and stained with Coomassie Brilliant Blue R250.



Original product page: https://qkine.com/product/recombinant-mouse-rat-activin-a-protein-qk012/

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