

**Synonym**

Activin A, INHBA

Source

Human Activin A Protein, premium grade(ACA-H5314) is expressed from CHO cells. It contains AA Gly 311 - Ser 426 (Accession # [P08476](#)).

Predicted N-terminus: Gly 311

It is produced under our rigorous quality control system that incorporates a comprehensive set of tests including sterility and endotoxin tests. Product performance is carefully validated and tested for compatibility for cell culture use or any other applications in the early preclinical stage.

GMP-ACAH37 is the GMP version of this ACA-H5314. These two proteins display indistinguishable performance profiles, thereby ensuring a seamless transition for end users from early preclinical stag to later clinical phases.

Molecular Characterization

Activin A(Gly 311 - Ser 426)
P08476

This protein carries no "tag".

The protein has a calculated MW of 13.0 kDa. The protein migrates as 13 kDa \pm 3 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 0.01 EU per μ g by the LAL method / rFC method.

Host Cell Protein

<0.5 ng/ μ g of protein tested by ELISA.

Host Cell DNA

<0.02 ng/ μ g of protein tested by qPCR.

Sterility

Negative

Mycoplasma

Negative

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μ m filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

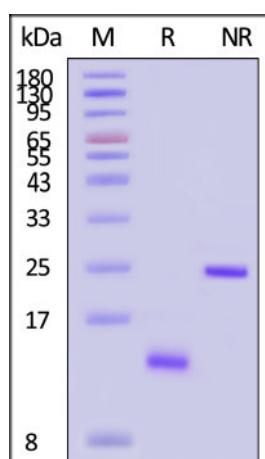
Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 24 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

Human Activin A Protein, premium grade on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with Coomassie Blue.

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and more!**



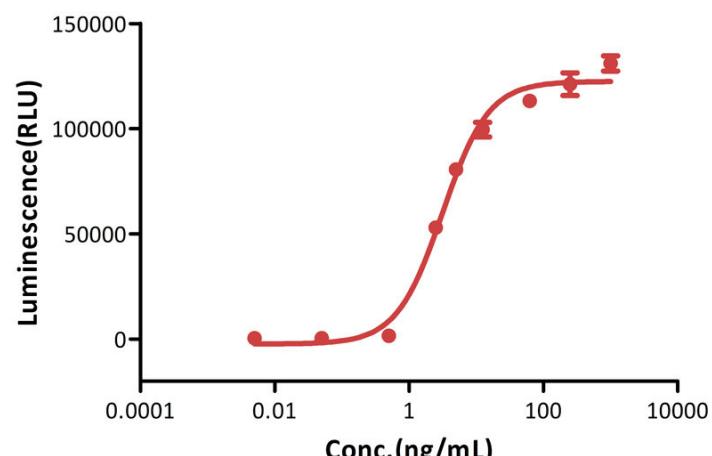
» www.acrobiosystems.com



The purity of the protein is greater than 95% (With Star Ribbon Pre-stained Protein Marker).

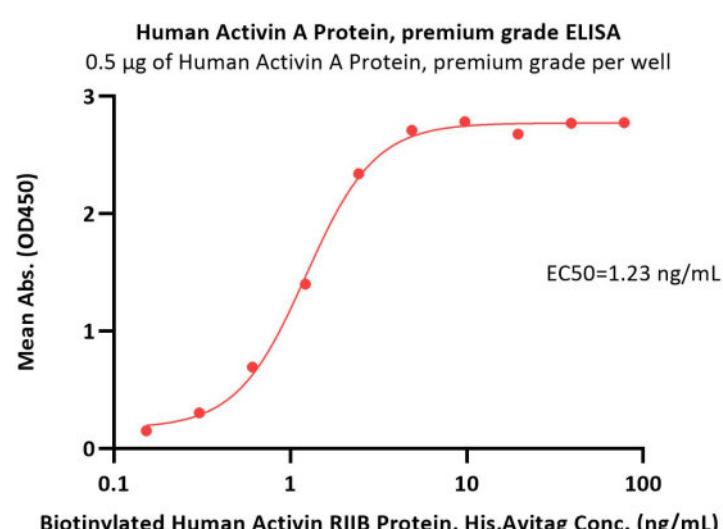
Bioactivity-CELL BASE

Human Activin A Protein, premium grade stimulates Human Activin RII (Luc) HEK293 Reporter Cell

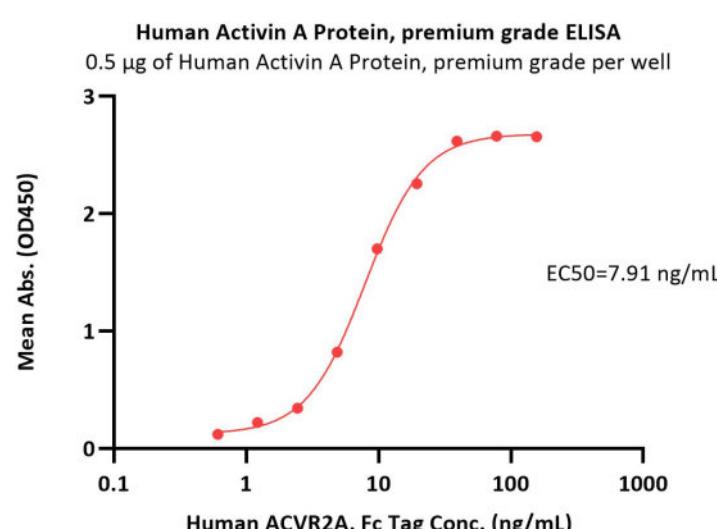


Human Activin A Protein, premium grade (Cat. No. ACA-H5314) stimulates Human Activin RII (Luc) HEK293 Reporter Cell. The specific activity of Human Activin A Protein, premium grade is $>5.00 \times 10^2$ IU/mg, which is calibrated against WHO Reference Reagent Activin A (Human, Recombinant) NIBSC code: 91/626 (QC tested).

Bioactivity-ELISA



Immobilized Human Activin A Protein, premium grade (Cat. No. ACA-H5314) at 5 μ g/mL (100 μ L/well) can bind Biotinylated Human Activin RIIB Protein, His, Avitag (Cat. No. ACB-H82E3) with a linear range of 0.2-2 ng/mL (QC tested).

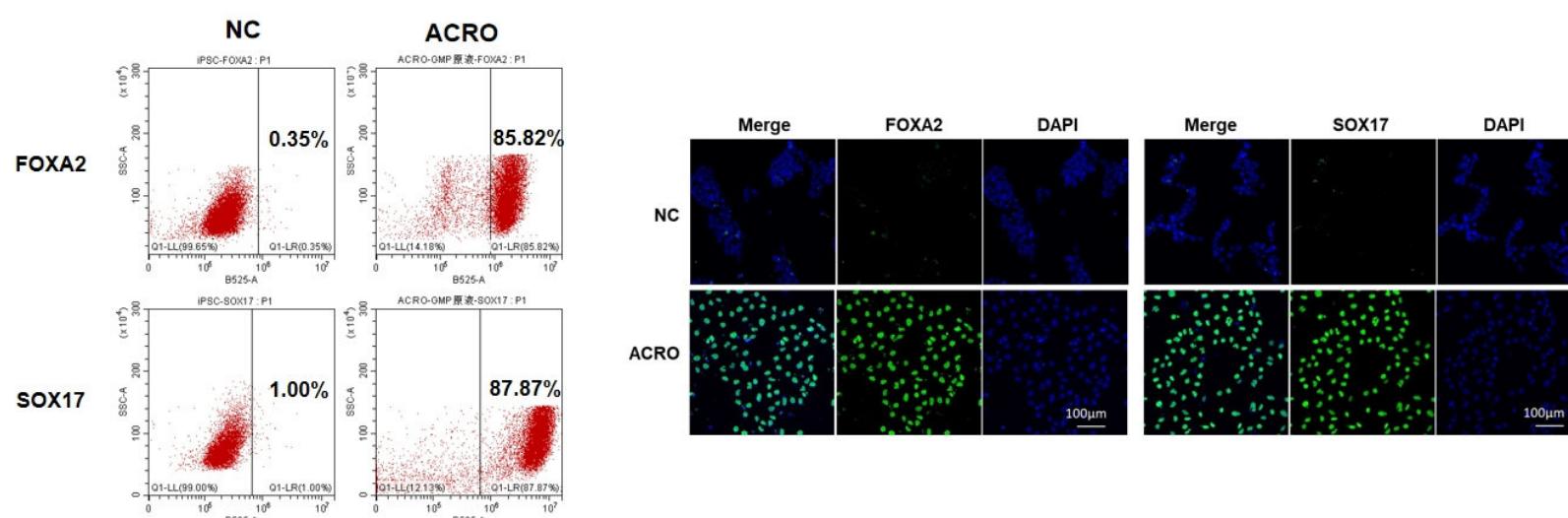


Immobilized Human Activin A Protein, premium grade (Cat. No. ACA-H5314) at 5 μ g/mL (100 μ L/well) can bind Human ACVR2A, Fc Tag (Cat. No. ACA-H5269) with a linear range of 0.6-20 ng/mL (Routinely tested).

Application Data

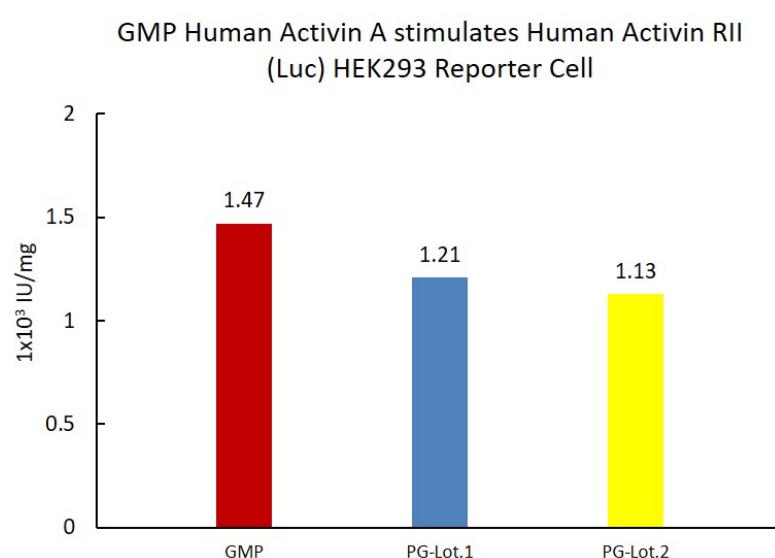
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Human Activin A Protein, premium grade (Cat. No. ACA-H5314) could effectively induce the endoderm differentiation by FOXA2 and SOX17 expression in immunofluorescence and FACS.

Bioactivity-Stability



The Cell based assay shows batch-to-batch consistency between Acro's GMP and PG Activin A.

Background

Activin and inhibin are two closely related protein complexes that have almost directly opposite biological effects. Activin enhances FSH biosynthesis and secretion, and participates in the regulation of the menstrual cycle. Many other functions have been found to be exerted by activin, including roles in cell proliferation, differentiation, apoptosis, metabolism, homeostasis, immune response, wound repair, and endocrine function. Conversely inhibin down regulates FSH synthesis and inhibits FSH secretion. Activins are nonglycosylated homodimers or heterodimers of various β subunits (β A, β B, β C, and β E in mammals), while Inhibins are heterodimers of a unique α subunit and one of the β subunits. Activin A is a widely expressed homodimer of two β A chains. The β A subunit can also heterodimerize with a β B or β C subunit to form Activin AB and Activin AC, respectively. The 14 kDa mature human β A chain shares 100% amino acid sequence identity with bovine, feline, mouse, porcine, and rat β A.

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