

Human Activin A / INHBA Protein (E. coli), premium grade

Catalog # ACA-H5113



Features and Advantages

- Seamless Transition from Preclinical to Clinical: Same cell clone, process, and QC as GMP products.
- Enhanced Production Standards: AOF raw materials, pharma-grade excipients, Grade B+A (ISO 5) environment.
- Comprehensive Quality Control: Additional strict testing for process impurities, sterility, and mycoplasma.
- Cost-Effective Solution: GMP-comparable quality at an economical price for early development.
- Risk Mitigation: Enhanced safety through rigorous impurity control and comprehensive testing.

Synonyms

Activin A, INHBA

Source

Human Activin A Protein (*E. coli*), premium grade (ACA-H5113) is expressed from *E. coli* cells. It contains AA Gly 311 - Ser 426 (Accession # [P08476](#)).

Predicted N-terminus: Met

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. When ready to transition into later clinical phases, we also offer a custom GMP protein service that tailors to your needs. We will work with you to customize and develop a GMP-grade product in accordance with your requests that also meets the requirements for raw and ancillary materials use in cell manufacturing of cell-based therapies.

Molecular Characterization

Activin A(Gly 311 - Ser 426)
P08476

This protein carries no "tag".

The protein has a calculated MW of 13.1 kDa. The protein migrates as 14 kDa±3 kDa under reducing (R) condition, and 25 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under non-reducing (NR) condition (SDS-PAGE).

Endotoxin

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

Host Cell Protein

<0.1 ng/µg of protein tested by ELISA.

Host Cell DNA

<0.001 ng/µg of protein tested by qPCR.

Sterility

Negative

Mycoplasma

Negative

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in 20 mM NaAc, 50 mM NaCl, pH4.5 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.

Shipping and Storage

This product is shipped at ambient temperature.

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.

ACRO Quality Management System

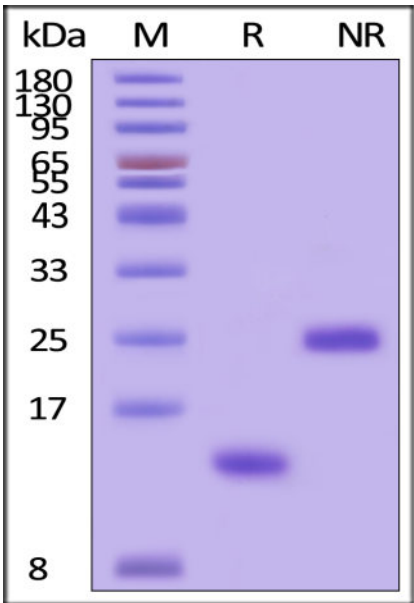
- [QMS\(ISO, GMP\)](#).
- [Quality Advantages](#)
- [Quality Control Process](#)

Quality Description

ACRO's Research-grade products are suitable for a wide range of cell culture applications, particularly for research use in academic institutions. These products are sterilized by filtration, followed by lyophilization where applicable. Typical specifications include endotoxin levels of <0.01 EU/μg and purities >95%. Biological activity is calibrated against WHO/NIBSC standards when available.

ACRO's Premium-grade (Pre-GMP) products are characterized by their high quality and enhanced safety profiles, making them ideal for early-stage discovery and manufacturing processes in cell therapy companies. A key advantage is their seamless transition to corresponding GMP-grade versions. Biological activity is calibrated against WHO/NIBSC standards when available. Typical specifications include endotoxin levels of <0.01 EU/μg and purities >95%. In addition, rigorous testing is conducted to ensure the absence of mycoplasma, HCD, and HCP, thereby guaranteeing product safety.

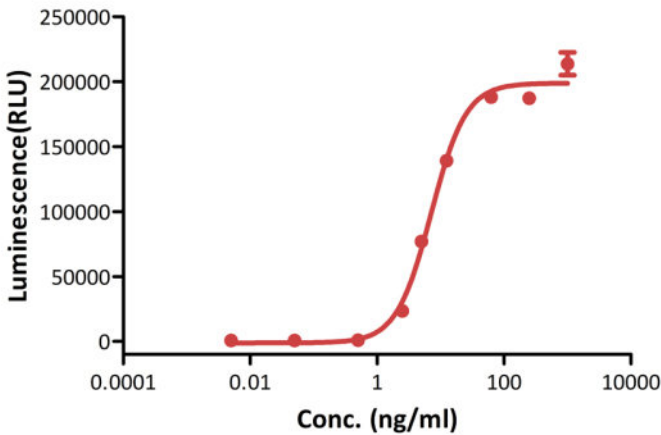
SDS-PAGE



Human Activin A Protein (*E. coli*), premium grade on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

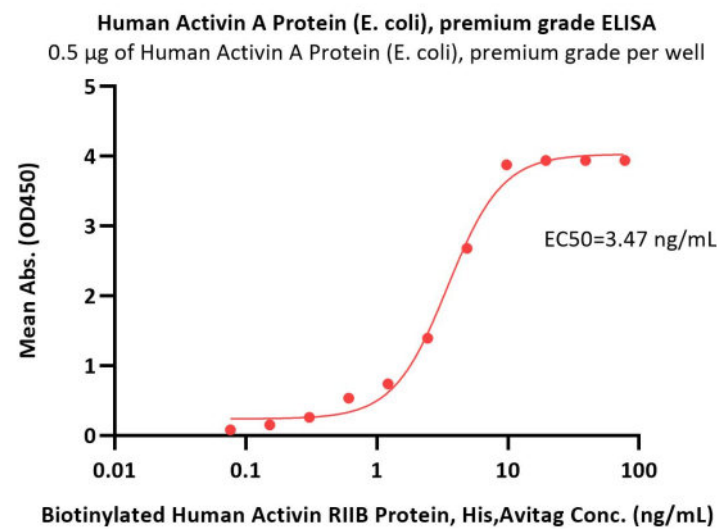
Bioactivity-CELL BASE

Human Activin A Protein (*E. coli*), premium grade stimulates Human Activin RII (Luc) HEK293 Reporter Cell

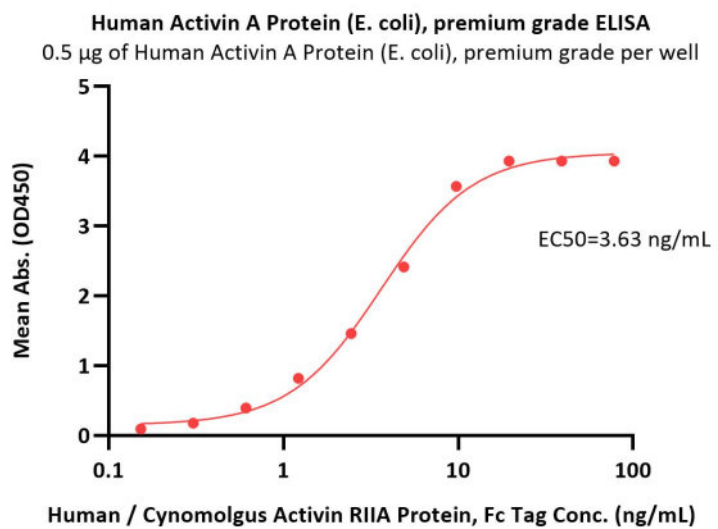


Human Activin A Protein (*E. coli*), premium grade (Cat. No. ACA-H5113) stimulates Human Activin RII (Luc) HEK293 Reporter Cell. The specific activity of Human Activin A Protein (*E. coli*), premium grade is > 5.00 x 10² IU/mg, which is calibrated against human Activin A WHO International Standard (NIBSC code: 91/626) (QC tested).

Bioactivity-ELISA



Immobilized Human Activin A Protein (*E. coli*), premium grade (Cat. No. ACA-H5113) at 5 µg/mL (100 µL/well) can bind Biotinylated Human Activin RIIB Protein, His,Avitag (Cat. No. ACB-H82E3) with a linear range of 0.08-10 ng/mL (QC tested).



Immobilized Human Activin A Protein (*E. coli*), premium grade (Cat. No. ACA-H5113) at 5 µg/mL (100 µL/well) can bind Human / Cynomolgus Activin RIIA Protein, Fc Tag (Cat. No. ACA-H5269) with a linear range of 0.2-10 ng/mL (Routinely tested).

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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