

Human HGF Protein, premium grade

Catalog # HGF-H5218



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.

Synonym

HGF, HPTA, SF

Source

Human HGF Protein, premium grade (HGF-H5218) is expressed from human 293 cells (HEK293). It contains AA Gln 32 - Ser 728 (Accession # [P14210-1](#)).

Predicted N-terminus: Gln 32

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-HGFH28 is the GMP version of this HGF-H5218. These two proteins display indistinguishable performance profiles, thereby ensuring a seamless transition for end users from early preclinical stage to later clinical phases.

Molecular Characterization

HGF(Gln 32 - Ser 728)
P14210-1

This protein carries no "tag".

The protein has a calculated MW of 79.7 kDa. The protein migrates as 83 kDa±3 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under non-reducing (NR) condition (SDS-PAGE) due to glycosylation.

Endotoxin

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

Host Cell Protein

<0.5 ng/µg of protein tested by ELISA.

Host Cell DNA

<0.02 ng/µg of protein tested by qPCR.

Sterility

Negative

Mycoplasma

Negative

Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 µm 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.

ACRO Quality Management System

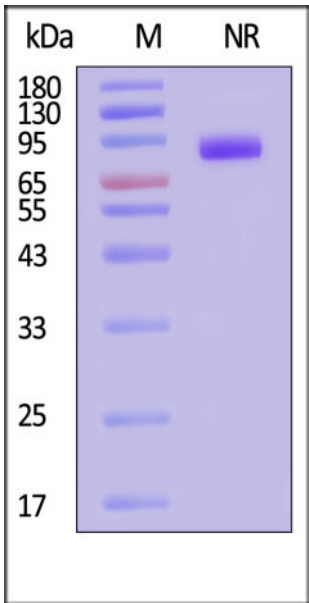
- [QMS\(ISO, GMP\)](#)
- [Quality Advantages](#)
- [Quality Control Process](#)

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.

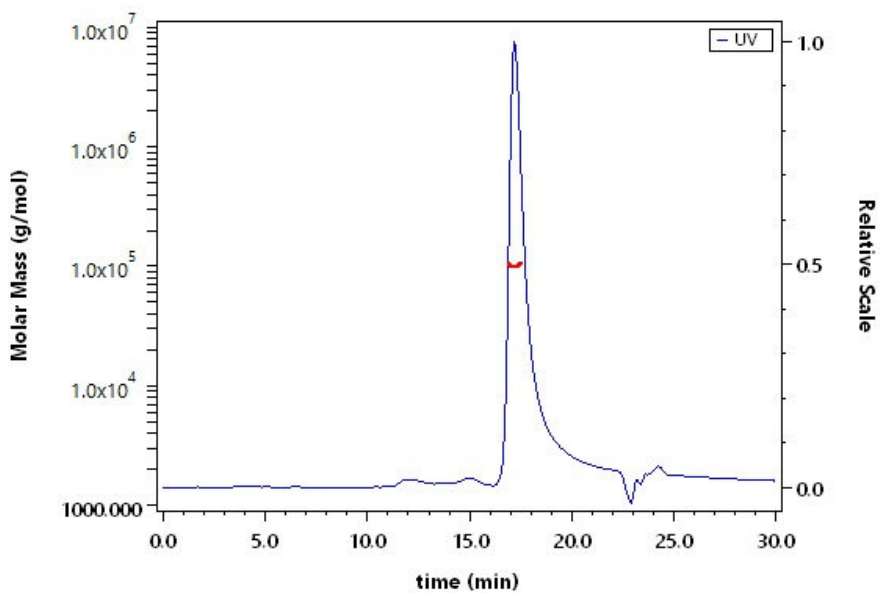
ACRO's Premium-grade (Pre-GMP) products are characterized by their high quality and enhanced safety profiles, making them ideal for early-stage discovery and manufacturing processes in cell therapy companies. A key advantage is their seamless transition to corresponding GMP-grade versions. Biological 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



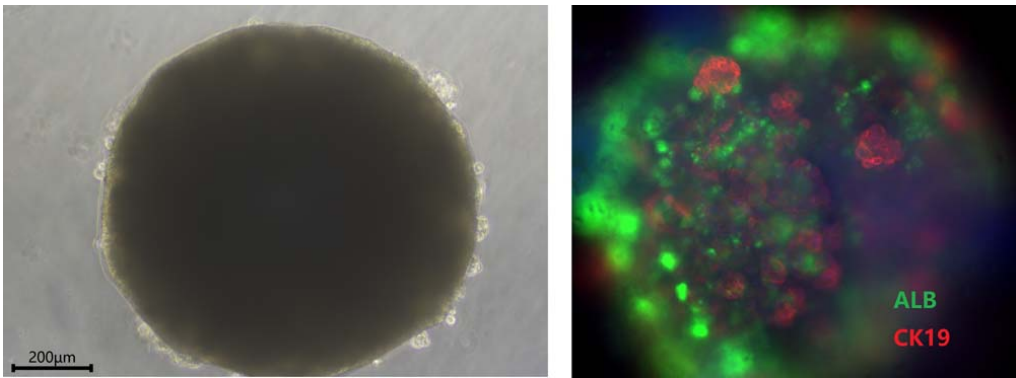
Human HGF Protein, premium grade on SDS-PAGE under non-reducing (NR) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

SEC-MALS



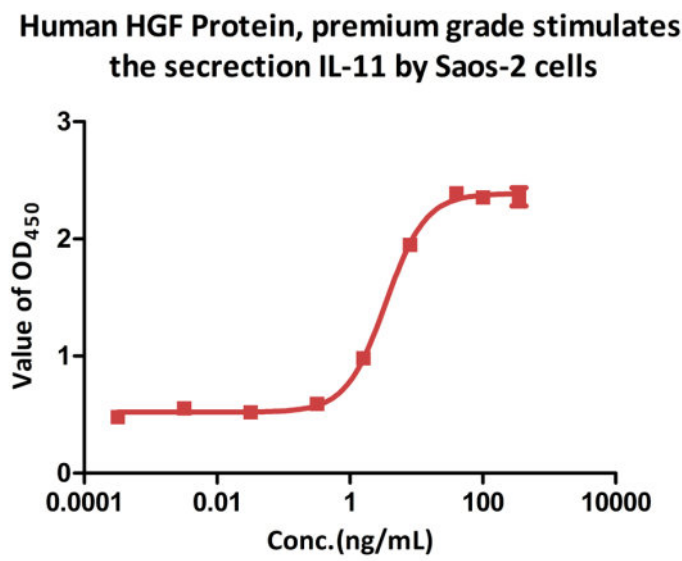
The purity of Human HGF Protein, premium grade (Cat. No. HGF-H5218) is more than 90% and the molecular weight of this protein is around 85-130 kDa verified by SEC-MALS.

Bioactivity-Organoid Culture



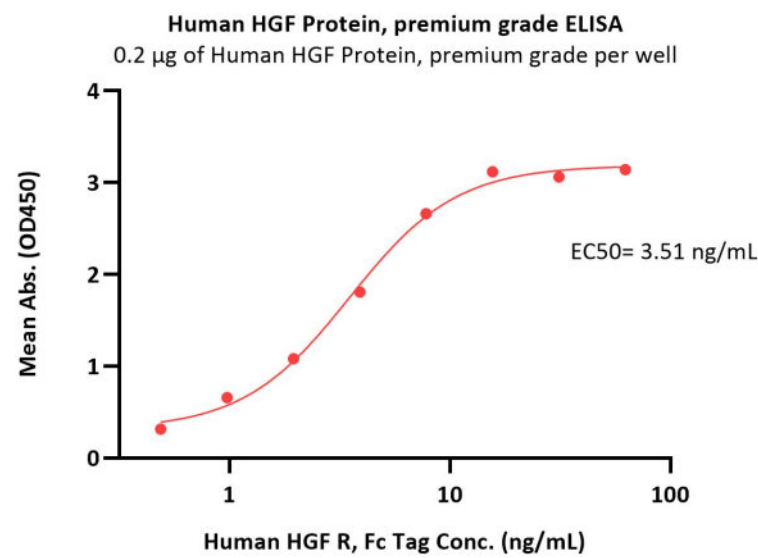
iPSC derived liver organoids forming cystic structure of bile duct were cultured with HGF (Cat. No. HGF-H5218).

Bioactivity-CELL BASE



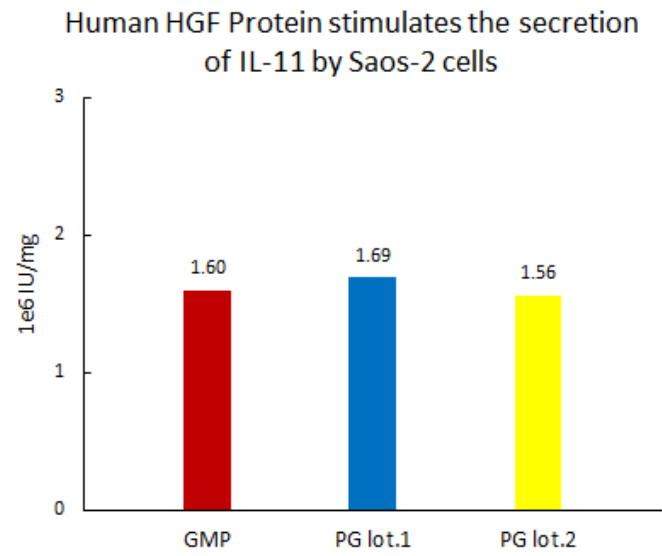
Human HGF Protein, premium grade (Cat. No. HGF-H5218) stimulates the secretion IL-11 by Saos-2 cells. The specific activity of Human HGF Protein, premium grade is > 6.00 x 10⁵ IU/mg, which is calibrated against WHO Hepatocyte Growth Factor(NIBSC code: 96/556) (QC tested).

Bioactivity-ELISA



Immobilized Human HGF Protein, premium grade (Cat. No. HGF-H5218) at 2 µg/mL (100 µL/well) can bind Human HGF R, Fc Tag (Cat. No. MET-H5256) with a linear range of 0.5-8 ng/mL (QC tested).

Bioactivity-Stability



Cell-based assay demonstrates batch-to-batch consistency between Acro's GMP and PG HGF.

Background

HGF, also known as scatter factor and hepatopoietin A, is a pleiotropic protein in the plasminogen subfamily of S1 peptidases , and acts as a growth factor for a broad spectrum of tissues and cell types. HGF signals through a transmembrane tyrosine kinase receptor known as MET. Activities of HGF include the induction of cell proliferation, motility, morphogenesis, inhibition of cell growth, and enhancement of neuron survival. HGF is a crucial mitogen for liver regeneration processes, HGF

promotes the motility of cardiac stem cells in damaged myocardium.

Human and murine HGF are cross-reactive. Human HGF is expressed as a linear, polypeptide-precursor glycoprotein residues. Proteolytic processing of this precursor generates the biologically active heterodimeric form of HGF, which consists of two polypeptide chains (α -chain and β -chain) held together by a single disulfide bond resulting in formation of a biologically active heterodimer.



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