# abcam

# Accelerating Drug Discovery with Abcam's Premium Bioactive Proteins

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Premium bioactive grade

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Expression system: HEK 293 cells

Protein length: Full length protein

Recombinant human IGF1 protein (Active) (ab270062)

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Compare (max 4)

Application: Cell Culture, FuncS, HPLC, MS, SDS-PAGE

Introduction

Over 70% of researchers cannot reproduce another scientist's experiments, revealed a survey by Nature. Additionally, Bradbury et al. (Nature, 517; 27-29; 2015) estimated that \$1.6 billion was lost on poorly characterized reagents worldwide. To help improve the quality of science and data reproducibility globally, Abcam recently introduced its Premium Bioactive Proteins, a new high-quality, off-the-shelf product line. Improving Experimental Reproducibility: Protein Analytics

Rigorous quality control ensures batch to batch consistency.

Link to ab259410

The Premium Bioactive Protein portfolio consists of intra- and extracellular proteins expressed in mammalian cells, produced under ISO 9001:2015 standards. The proteins are all tag-free, which eliminates the possibility of interference from tags in sensitive assays. Following production and purification, each protein undergoes extensive analytical characterization to assess its purity, using intact mass LCMS, Reverse Phase HPLC, SDS-PAGE and endotoxin testing methodologies. Finally, the potency of each protein is determined using a relevant functional assay.

The poster will provide an overview of the protein production process and include detailed analytical and functional characterization data provided for all proteins at the time of release. The communication will also describe analytical criteria established to ensure batch-to-batch consistency.

The launch of the Premium Protein commercial range is one of the latest initiatives undertaken by Abcam to improve reagent reproducibility across the drug discovery and development sector.

### Premium Bioactive Protein Overview

- Abcam identified a gap in the off the shelf reagent space for high-quality mammalian proteins with biophysical characterization, including analytical data and cell-based assays.
- Commercial reagent landscape consists mainly of E. coli proteins with limited biophysical data, mostly SDS-PAGE gels.
- At present, the Abcam Premium Protein commercial portfolio consists of growth factors and cytokines (human and mouse) and we add about 25 new products a month.
- These proteins are used for various in vitro use applications as well as in cell culture.

### Premium Bioactive Protein Analytical Specifications





Human TNF alpha, ab259410











#### **Certificate of Analysis** abcam abcam abcam Certificate of Analysis **Certificate of Analysis** Certificate of Analysis Recombinant Human TNF alpha Protein (Acti Product name: Purity by HPLC SDS PAGE Description: Product code: Recombinant proteir 150 kDa 🗕 🚤 Ab259410 100 kDa — Lot number: GR3415722-2 Date of manufacture: 22<sup>nd</sup> October 2021 Constituents: Potassium Phosphate, Trehalose Room temperature United States Shipping conditions: Country of Origin: Purity 100%, Pass Source: Accession: HEK293 P01375 Mass determinatio n by ESI TOF 7410.36 +/- 10Dc Species: Sequence: VRSSSRTPSDKPVAHVVANPQAEGQLQWLNRRANALLANGVELRDNQLVVPSE GLYLIYSQVLFKGQGCPSTHVLLTHTISRIAVSYQTKVNLLSAIKSPCQRETPEGAEAK PWYEPIYLGGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIIAL Protein length Val77-Leu233 Tags N-terminal glycine Stability and storage: Store lyophilized form at room temperature. Reconstitute, aliquot and store at -80°C for 12 months or +4°C for 1 week. Name Name: Avoid repeated freeze-thaw Role: M + 0 Da, Pass Role: philized contents may appear as either a translucent film or a white Signature Signature powder. This variance does not affect the quality of the product Biological activity assay standard. The ED50 as determined by the dose Phosphate Buffered Saline Date: Date: Abcam warrants that its product conforms to the information contained in this Certifica dependant Result Analysis Specification killing/apoptosis of L-929



### Conclusion

The Premium Bioactive Proteins at Abcam offers a new commercial option for purchase for researchers in Drug Discovery. These proteins are highly validated and are of the highest quality and purity offered by commercial reagent providers. Premium Proteins address the need for reagent reproducibility for drug discovery, and are available to purchase off the shelf immediately, saving the time and cost of internal reagent development.