proteintech®
Antibodies | ELISA kits | Proteins

Catalog Number: HZ-1316-GMP

Data Sheet

GMP HumanKine® IL-34 (Recombinant Human)

Animal Component-Free	Human cell expressed	Tag-Free	Endotoxin Free

Product Description

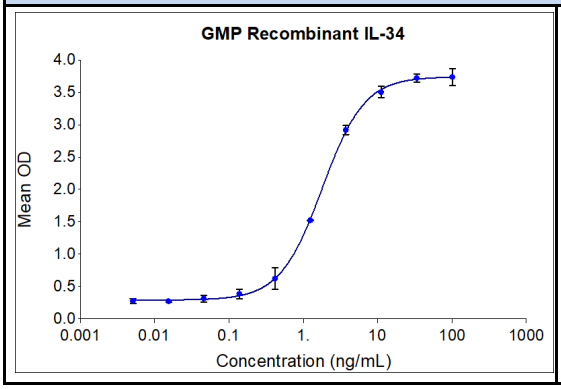
IL-34 is a 6- α -helix, proinflammatory cytokine that serves as a ligand for colony-stimulating factor-1 receptor (CSF1R). It is expressed most abundantly by spleen cells. It primarily stimulates human peripheral blood monocyte proliferation and macrophage colony formation. It is also required for Langerhans cell and microglia development. IL-34 has been shown to play a protective role in cancer and Alzheimer's disease, but it can promote the progression of several autoimmune, inflammatory, and metabolic diseases. As such IL-34 could be used as a biomarker to mark the progression of these diseases (PMID: 22579672, 27577879, 31940023).

Alternative Names	IL34, Interleukin-34, C16orf77, MGC34647
Accession Number	Q6ZMJ4
Source	Human Embryonic Kidney cells (HEK293). HEK293-derived IL-34 protein
Adventitious Virus	Master Cell Bank tested Negative for Adventitious Viruses

Specifications

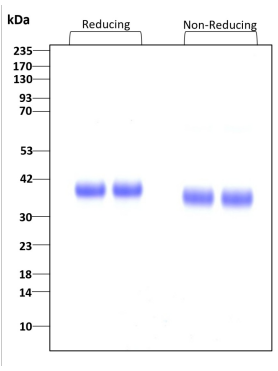
Test	Method	Specification
Activity	Dose-dependent release of MCP-1 from peripheral blood mononuclear cells	0.45-4.5 ng/mL
Molecular Mass	SDS-PAGE	38 kDa reduced, 36 and 68 kDa non-reduced, homodimer, glycosylated
Purity	SDS-PAGE	>95%
Endotoxin	LAL	<0.1 EU/μg
Mycoplasma	PCR	Not Detected

Activity Data



Recombinant human IL-34 induces dose-dependent release of MCP-1 in human peripheral blood mononuclear cells (PBMCs). PBMCs were treated with increasing concentration of IL-34 for 48 hours before supernatant collection. The supernatant was tested for MCP-1 via ELISA kit. The EC50 was determined using a 4-parameter non-linear regression model. Activity determination was

SDS-PAGE



Purity of GMP-grade recombinant human IL-34 was determined by SDS- polyacrylamide gel electrophoresis. The protein was resolved in an SDS- polyacrylamide gel in reducing and non-reducing conditions and stained using Coomassie blue.

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Preparation	
Shipping Temperature	ambient temperature
Formulation	1 x PBS, See Certificate of Analysis for details
Reconstitution	Briefly centrifuge the vial before opening. It is recommended to reconstitute the protein to 0.2 mg/mL in sterile 1x PBS pH 7.4 + 0.1% HSA. Gently swirl or tap vial to mix.

	Product Form	Temperature Conditions	Storage Time (From Date of Receipt)
Stability and Storage	Lyophilized	-20°C to -80°C	Until Expiry Date
	Lyophilized	Room Temperature	2 weeks
	Reconstituted as per CofA	-20°C to -80°C	6 months
	Reconstituted as per CofA	4°C	1 week
	Avoid repeated freeze-thaw cycles.		

Proteintech GMP Quality Policy
HumanKine® GMP Proteins

Invitro recombinant protein production can be prone to variability due to various reasons ranging from quality of raw materials to inconsistency in the process. Therefore, HumanKine®, a proteintech brand's GMP proteins are produced and tested under an ISO 13485 certified quality management system in a clean room facility. Proteintech manufactures the GMP HumanKine® products according to the applicable sections in the following documents: USP Chapter 1043 (Ancillary Materials for Cell, Gene, and Tissue-Engineered Products, USP Chapter 92 (Growth Factors and Cytokines Used in Cell Therapy Manufacturing), WHO TRS, No. 822, 1992 Annex 1 (Good Manufacturing Practices for Biological Products), Ph. Eur. General Chapter 5.2.12, and EudraLex – Volume 4 – Part IV (Guidelines on GMP specific to ATMPs). Proteintech strives to achieve the utmost quality GMP raw material ensuring all applicable guidelines are taken into consideration.

The QMS is built to provide our customers with consistent and pure product delivered by documented processes, qualified personnel, validated processes, qualified equipment, qualified vendors, and a stringent final product release process. Although the final product release process is important, Proteintech performs in-process QC steps after each major manufacturing stage. Production records and facilities may be available for an inspection by approved personnel.

Our GMP policy covers all the aspects of production; from raw materials, facility, equipment, and Instruments to training and personal hygiene of staff. It also guarantees that the process is explicit, validated and well documented for transparency and traceability.

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