Recombinant Mouse IL-6, Tag Free

Cat number: KGM1006
Store at -80℃ for 12 months

For Research Use Only（科研专用）

General Information

Synonyms	BSF2; BSF-2; CDF; CTL differentiation factor ; HSF; IFNB2; IFN-beta-2; IL6; IL-6
Accession #	P08505
Source	Human embryonic kidney cell, HEK293-derived mouse IL-6 protein
	Phe25-Thr211
Predicted Moleucular weight	21.8 kDa

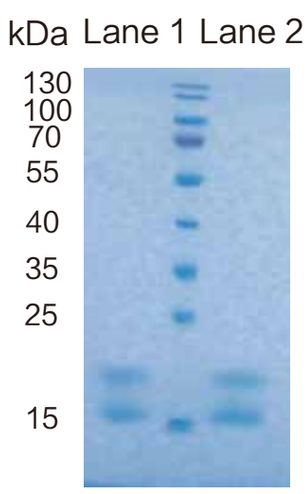
Components and Storage

Formulation	Solution protein.
	Dissolved in sterile PBS buffer , see tube wall for specific concentration.
	This solution can be diluted into other aqueous buffers. Centrifuge the vial prior to opening.
Storage and Stability	Avoid repeated freeze-thaw cycles.
	It is recommended that the protein be aliquoted for optimal storage.
	12 months from date of receipt, -80 °C as supplied.
Shipping	Shipping with dry ice.

Quality

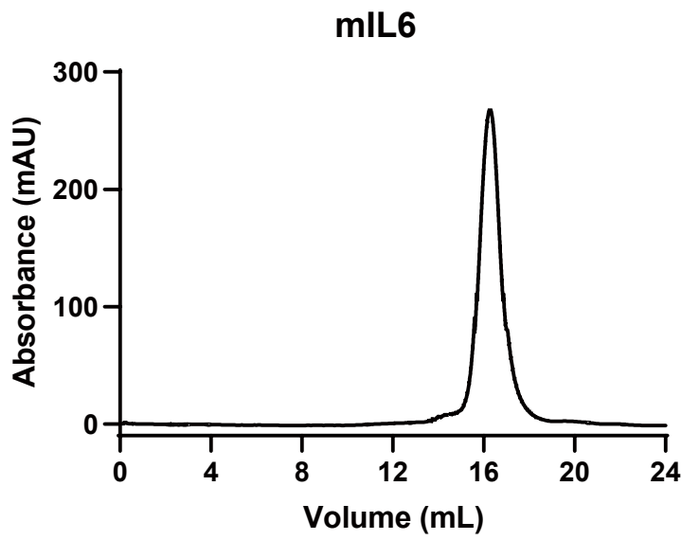
Purity	> 95%, determined by SDS-PAGE.
Endotoxin Level	<0.010 EU per 1 ug of the protein by the LAL method.
Activity	Measured in a cell proliferation assay using T1165.85.2.1 mouse plasmacytoma cells.
	The EC50 for this effect is 0.01-0.05 ng/mL.

SDS-PAGE



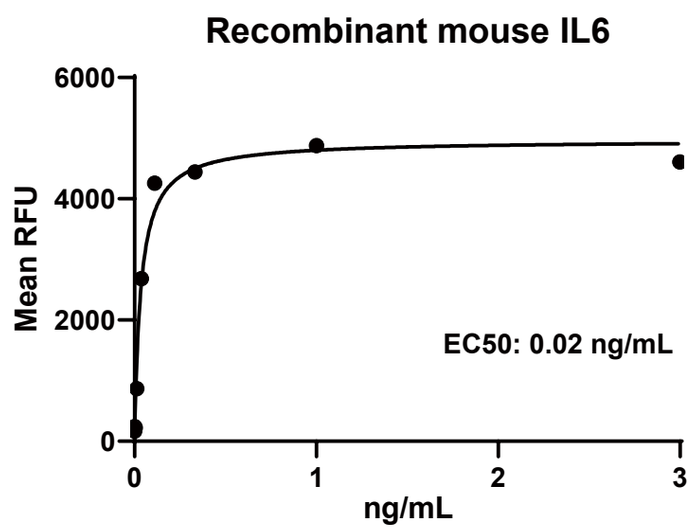
4 ug/lane protein was resolved with SDS-PAGE under non-reducing (NR) and reducing (R) conditions and visualized by Coomassie Blue staining.

Gel filtration



Size-exclusion chromatography of recombinant mouse IL6 protein (280 nm absorbance)

Bioactivity



Recombinant mouse IL6 stimulates cell proliferation of the T1165.85.2.1 mouse plasmacytoma cells.

Background

Interleukin-6 (IL-6) plays important roles in the acute phase reaction, inflammation, hematopoiesis, bone metabolism, and cancer progression (1 – 5). Mature mouse IL-6 is 187 amino acids (aa) in length and shares 39% and 85% aa sequence identity with human and rat IL-6, respectively (6 – 8). IL-6 induces signaling through a cell surface heterodimeric receptor complex composed of a ligand binding subunit (IL-6 R alpha) and a signal transducing subunit (gp130). IL-6 binds to IL-6 R alpha, triggering IL-6 R alpha association with gp130 and gp130 dimerization (9). Soluble forms of IL-6 R alpha are generated by both alternative splicing and proteolytic cleavage (5). In a mechanism known as trans-signaling, complexes of soluble IL-6 and IL-6 R alpha elicit responses from gp130-expressing cells that lack cell surface IL-6 R alpha (5). Trans-signaling enables a wider range of cell types to respond to IL-6, as the expression of gp130 is ubiquitous, while that of IL-6 R alpha is predominantly restricted to hepatocytes, monocytes, and resting lymphocytes (2, 5). IL-6, along with TNF-alpha and IL-1, drives the acute inflammatory response and the transition from acute inflammation to either acquired immunity or chronic inflammatory disease (1 – 5). When dysregulated, it contributes to chronic inflammation in obesity, insulin resistance, inflammatory bowel disease, arthritis, sepsis, and atherosclerosis (1, 2, 5). IL-6 can also function as an anti-inflammatory molecule, as in skeletal muscle where it is secreted in response to exercise (2). In addition, it enhances hematopoietic stem cell proliferation and the differentiation of Th17 cells, memory B cells, and plasma cells (1, 10).

Reference

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