Cytokines

Mouse Recombinant IL-6

Interleukin 6

Catalog #	78052.1	10 µg
	78052	100 µg
	78052.2	1000 µg

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Product Description

Interleukin 6 (IL-6) is a pleiotropic growth factor with the wide range of biological activities in immune regulation, hematopoiesis, and oncogenesis. IL-6 is produced by a variety of cell types including T cells, B cells, monocytes and macrophages, fibroblasts, hepatocytes, vascular endothelial cells, and various tumor cell lines. On its own or in combination with other factors such as IL-2 and interferon-γ, IL-6 stimulates the proliferation of B cells, T cells, and hybridoma cells (Nordan et al.; Van Snick et al.; Gauldie et al.; Mihara et al.; Tanaka et al). In combination with cytokines such as IL-3, GM-CSF and SCF, IL-6 has been shown to promote hematopoietic progenitor cell proliferation and differentiation in vitro. IL-6 signals through a cell surface type I cytokine receptor complex consisting of the ligand-binding IL-6α (CD126) and the signal-transducing gp130 subunits. The binding of IL-6 to its receptor system includes activation of JAK/STAT signaling pathway (Mihara et al.; Peters et a; Tanaka et al.l).

Product Information

Alternative Names:	B cell differentiation factor, BSF-2, IFN-β2, Interleukin-6
Accession Number:	P08505
Amino Acid Sequence:	MFPTSQVRRG DFTEDTTPNR PVYTTSQVGG LITHVLWEIV EMRKELCNGN SDCMNNDDAL AENNLKLPEI QRNDGCYQTG YNQEICLLKI SSGLLEYHSY LEYMKNNLKD NKKDKARVLQ RDTETLIHIF NQEVKDLHKI VLPTPISNAL LTDKLESQKE WLRTKTIQFI LKSLEEFLKV TLRSTRQT
Predicted Molecular Mass:	21.9 kDa
Species:	Mouse
Cross Reactivity:	Rat, Monkey
Formulation:	Lyophilized from a sterile filtered aqueous solution containing 0.1% trifluoroacetic acid.
Source:	E. coli

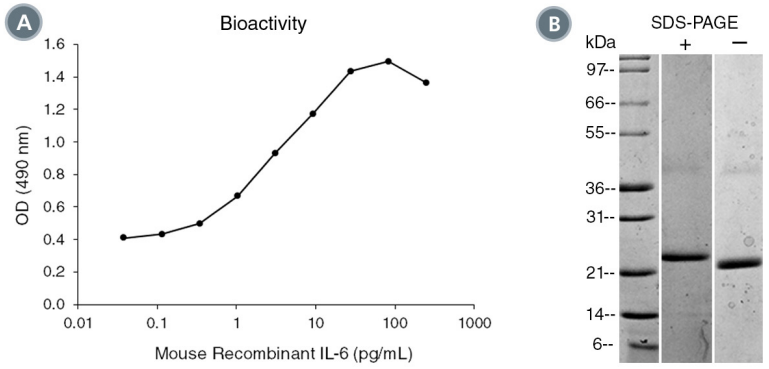
Specifications

Activity:	The specific activity is ≥ 1 x 10^6 units/mg (EC50 ≤ 1 ng/mL) as determined by cell proliferation assay using 7TD1 cells.
Purity:	≥ 95%
Endotoxin Level:	Measured by kinetic limulus amebocyte lysate (LAL) analysis and is ≤ 1 EU/µg protein.

Preparation and Storage

Storage:	Store at -20°C to -80°C.
Stability:	Stable as supplied for 12 months from date of receipt.
Reconstitution:	Centrifuge vial before opening. Resuspend the product in 10 mM hydrochloric acid containing 0.1% bovine serum albumin (BSA) to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. Store at 2 - 8°C for up to 1 month or at -20°C to -80°C for up to 3 months. Avoid repeated freeze-thaw cycles. NOTE: If reconstituted product will be used immediately BSA is not required.

Data



(A) The biological activity of Mouse Recombinant IL-6 was tested by its ability to promote the proliferation of 7TD1 cells. Cell proliferation was measured after 66 hours of culture using a fluorometric assay method. The EC50 is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC50 in the above example is 2.4 - 3.6 pg/mL.
(B) 1 µg of Mouse Recombinant IL-6 was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Mouse Recombinant IL-6 has a predicted molecular mass of 21.9 kDa.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

References

Gauldie J et al. (1987) Interferon beta 2/B-cell stimulatory factor type 2 shares identity with monocyte-derived hepatocyte-stimulating factor and regulates the major acute phase protein response in liver cells. Proc Natl Acad Sci U S A 84(20): 7251–5.
Mihara M et al. (2012) IL-6/IL-6 receptor system and its role in physiological and pathological conditions. Clin Sci (Lond) 122(4): 143–59.
Nordan RP et al. (1987) Purification and NH2-terminal sequence of a plasmacytoma growth factor derived from the murine macrophage cell line P388D1. J Immunol 139(3): 813–7.
Peters M et al. (1998) Interleukin-6 and soluble interleukin-6 receptor: direct stimulation of gp130 and hematopoiesis. Blood 92(10): 3495–504.
Tanaka T et al. (2014) IL-6 in inflammation, immunity, and disease. Cold Spring Harb Perspect Biol 6(10): a016295.
Van Snick J et al. (1986) Purification and NH2-terminal amino acid sequence of a T-cell-derived lymphokine with growth factor activity for B-cell hybridomas. Proc Natl Acad Sci U S A 83(24): 9679–83.

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