

Recombinant Mouse IL-11, Tag Free

Information

Accession #	P47873
Alternate Names	IL11; IL-11; IL-11Oprelvekin; interleukin 11; interleukin-11; Oprelvekin
Source	Human embryonic kidney cell, HEK293-derived mouse IL-11 protein
Protein sequence	Gly23-Leu199
M.Wt	19.1 kDa
Appearance	Solution protein
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. - 3 years from date of receipt, -20 to -70°C as supplied.
Concentration	0.2 mg/mL
Formulation	Dissolved in sterile PBS buffer.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. This solution can be diluted into other aqueous buffers.
Biological Activity	The EC ₅₀ for this effect is 15-31.2 pg/mL. Measured in a cell proliferation assay using T11 mouse plasmacytoma cells.
Shipping Condition	Shipping with dry ice.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Quality Control

Purity	> 95%, determined by SDS-PAGE.
Endotoxin	<0.010 EU per 1 ug of the protein by the LAL method.

Description

IL-11 (Interleukin 11) is a pleiotropic cytokine in the IL-6 family, which also includes LIF, CNTF, Oncostatin M, Cardiotrophin-1, IL-27 and IL-31^[1-4]. In humans, IL-11 was also independently discovered as an adipogenesis inhibitory factor (AGIF)^[3]. The mouse IL-11 cDNA encodes a 199 amino acid (aa) precursor, which generates a 178 aa, 19 kDa mature unglycosylated protein. Mature mouse IL-11 shares 88%, 97%, and 89% aa sequence identity with human, rat and canine IL-11, respectively. IL-11 is secreted by osteoblasts, synoviocytes, fibroblasts, chondrocytes, intestinal myofibroblasts, and trophoblasts, among other cell types^[1]. It is found in the plasma mainly during inflammation, such as that associated with viral infection, cancer, or inflammatory arthritis, and is considered to be primarily anti-inflammatory^[1]. It stimulates hematopoiesis and thrombopoiesis, regulates macrophage differentiation, and confers

mucosal protection in the intestine ^[1]. It has also been found to enhance T cell polarization toward Th2, promote B cell IgG production, increase osteoclast bone absorption, protect endothelial cells from oxidative stress, and regulate epithelial proliferation and apoptosis ^[1]. IL-11 synergizes with several other cytokines to produce these effects, and its effects overlap with those of IL-6 ^[1]. IL-11 receptor activation requires formation of a complex of two IL-11 molecules with two molecules of the ligand-binding IL-11 R alpha subunit and two molecules of the ubiquitously expressed cell signaling beta subunit, gp130 ^[5].

Reference

- [1] Putoczki, T. and M. Ernst (2010) J. Leukoc. Biol. 88:1109.
- [2] Paul, S.R. et al. (1990) Proc. Natl. Acad. Sci. USA 87:7512.
- [3] Kawashima, I. et al. (1991) FEBS Lett. 283:199.
- [4] Morris, J.C. et al. (1996) Exp. Hematol. 24:1369.
- [5] Barton, V.A. et al. (2000) J. Biol. Chem. 275:36197.
- [6] Curtis, D.J. et al. (1997) Blood 90:4403.
- [7] Baumann, H. et al. (1996) J. Immunol. 157:284.
- [8]- Karow, J. et al. (1996) Biochem. J. 318:489

APExBIO Technology

www.apexbt.com

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com