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Product Data Sheet

Recombinant Mouse IL-22 (carrier-free)

Catalog # / Size: 576202 / 10 µg
576204 / 25 µg
576206 / 100 µg
576208 / 500 µg

Source: Mouse IL-22, amino acids Leu34-Val179 (Accession # NM_016971) was expressed in *E. coli.*

Molecular Mass: The 147 amino acid N-terminal methionylated recombinant protein has a predicted molecular mass of approximately 16.8 kDa. The DTT-reduced protein migrates at approximately 15 kDa and the non-reduced protein migrates at approximately 13 kDa by SDS-PAGE.

Purity: Purity is >98%, as determined by Coomassie stained SDS-PAGE.

Endotoxin Level: Endotoxin level is <0.1 EU/µg (<0.01ng/µg) protein as determined by the LAL method.

Activity: The ED_{50} is 0.095-0.265 ng/ml, corresponding to a specific activity of 1.05-0.38 $X10^7$ units/mg, as determined by a dose dependent stimulation of human Colo205 cells in production of IL-10.

Preparation: 10-100µg sizes are bottled at 200µg/ml. 500µg and larger sizes are bottled at the concentration indicated on the vial.

Formulation: 0.22 µm filtered protein solution is in 10mM NaH_2PO_4, 150mM NaCl, pH 7.2.

Storage: Unopened vial can be stored at 4°C for three months, at -20°C for six months, or at -70°C for one year. For maximum results, quick spin vial prior to opening. Stock solutions should be prepared at no less than 10µg/mL in buffer containing carrier protein such as 1% BSA or HSA or 10% FBS. For long term storage, aliquot into polypropylene vials and store in a manual defrost freezer. **Avoid repeated freeze/thaw cycles.**

Applications:

Applications: Bioassay

Recommended Usage: Use when high specific biological activity is required.

Description: IL-22, a cytokine structurally related to IL10, was originally identified in the mouse as a gene induced by IL9 in T cells and mast cells (1). IL-22 was initially designated as ILTIF (IL10-related T cell-derived inducible factor). Mouse IL-TIF consists of 179 amino acids, including four cysteins, and has a predicted molecular weight of 20 KD. IL-22 shows 22% sequence identity with mouse IL-10 and belongs to a family of cytokines with limited homology to IL-10, namely IL-10, IL-19, IL-20, IL-24, IL-26, IL-28A, IL-28B, and IL-29 (the latter 3 also known as IFN-λ) (3). IL-22 biological activity is initiated by binding to a cell-surface complex composed of IL-22R1 and IL-10R2 receptor chains and further regulated by interactions with a soluble binding protein, IL-22BP, which shares sequence similarity with an extracellular region of IL-22R1 (sIL-22R1) (3). Both chains of the IL-22R complex belong to the class II CRF. Two types of IL-22-binding receptor have been discovered, a membrane-bound receptor and a soluble receptor, both encoded by different genes (4). IL-22 is produced by immune cells and acts on nonimmune cells to regulate local tissue inflammation. As a product of the recently identified T helper 17 lineage of CD4(+) effector lymphocytes, IL-22 plays a critical role in mucosal immunity as well as in dysregulated inflammation observed in autoimmune diseases (5).

Antigen References:

1. Dumoutier L, *et al.* 2000. *J. Immun.* 164:1814.
2. Xie MH, *et al.* 2000. *J. Biol. Chem.* 275:31335.
3. Jones BC, *et al.* 2008. *Structure*.
4. Kotenko SV, *et al.* 2001. *J. Immun.* 166:7096.
5. Chang C, *et al.* 2006. *Cell Research* 16:902.

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