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Product Data Sheet

Recombinant Rat IL-2 (carrier-free)

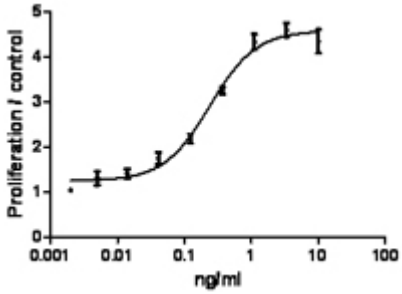
Catalog # / Size: 579502 / 10 µg
579504 / 25 µg
579506 / 100 µg
579508 / 500 µg

Source: Rat IL-2, amino acids Ala21-Met153 (Accession # NM_053836) was expressed in *E. coli.*

Molecular Mass: The 134 amino acid N-terminal methionylated recombinant protein has a predicted molecular mass of 15,396 Da. The DTT-reduced protein migrates at approximately 14kDa and the non-reduced protein migrates with slightly greater mobility 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.



CTLL-2 proliferation induced by rat IL-2

Activity: ED50 = 0.102 - 0.295 ng/ml, corresponding to a specific activity of 9.8 - 3.39 x 10^6 units/mg, as determined by the dose dependent stimulation of CTLL-2 cells.

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

Formulation: 0.22 µm filtered protein solution is in 5mM NaH_2PO_4, 5mM citric acid, 150mM NaCl, pH 4.0.

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.

Application References: 1. Xiao X,. *et al.* 2012. *J. Immunol.* 188:892. PubMed.

Description: Interleukin 2 was discovered through its function as a T cell growth factor (TCGF). IL-2 binds to IL-2 receptor which is expressed in T and B cells, thymocytes, and NK cells. The IL-2 receptor comprises three distinct components: the α -chain, which is cytokine specific, and the β- and γc-subunits which are share with the IL-15 receptor. In addition, the γ c-subunit is a component of a series of other cytokine receptors, these being members of the γc cytokine receptor family (IL-4, IL-7, IL-9, and IL-21) (3). IL-2 signaling may play a major role in the differentiation of regulatory T cells (4). IL-2, IL-15, and IL-7 can all support NK cell differentiation; nevertheless, analyses of IL-2(-/-), IL-2Rα(-/-) mice fail to exhibit significant defects in NK cell development. This data suggest that IL-2 might have a redundant role in NK cell differentiation (4).

Antigen References:
1. Lowenthal JW *et al, Nature* 315:669-672 1985.
2. Waldman TA *et al, Nat Rev Immunol* 6:595-601 2006
3. de Bakker BI *et al, J Cell Science* 121:627-633 2008
4. Averil M *et al, Annu. Rev. Immunol* 24:657-679 2006.

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