
Product Data Sheet

Product Name: β -Interleukin II (44-56)

Cat. No.: GP10080

Chemical Properties

Cas. No. 309247-07-2

SMILES C[C@@H](CC)[C@H](N)C(N[C@H](CC(C)C)C(N[C@H](CC(N)=O)C(NCC(N[C@H]([C@@H](CC)C)C(N[C@H](CC(N)=O)C(N[C@H](CC(N)=O)C(N[C@H](CC1=CC=C(O)C=C1)C(N[C@H](CCCCN)C(N[C@H](CC(N)=O)C(N2CCC[C@H]2C(N[C@H](CCCCN)C(N[C@H](CC(C)C)C(O)=O)=O)=O)=O)=O)=O)=O)=O)=O)=O)=O)=O)=O)=O

Formula $C_{68}H_{113}N_{19}O_{19}$

M.Wt

1500.74

Solubility $\geq 150\text{mg/mL}$ in DMSO

Storage

Store at -20°C

General tips

For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure

Background

β -Interleukin II (44-56), ($C_{68}H_{113}N_{19}O_{19}$) is a peptide with the sequence NH₂-ILE-LEU-ASN-GLY-ILE-ASN-ASN-TYR-LYS-ASN-PRO-LYS-LEU-COOH, MW= 1500.7. Interleukin 2 (IL-2) belongs to the interleukin family, a type of cytokine signaling molecule in the immune system, and it is a protein that regulates the activities of the white blood cells (leukocytes, often lymphocytes) responsible for immunity. IL-2, a soluble hormone-like mediator of the immune system, was the first interleukin molecule to be identified and characterized. It is necessary for the growth, proliferation, and differentiation of T cells to become 'effector' T cells. IL-2 is normally produced by T cells during an immune response and is necessary for the development of T cell immunologic memory, which depends upon the expansion of the number and function of antigen-selected T cell clones. IL-2 is also necessary for the maturation of a subset of T cells, termed regulatory T cells, during T cell development in the thymus.

Caution: Product has not been fully validated for medical applications. For research use only.

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References:

1. Cantrell DA, Smith KA (June 1984). "The interleukin-2 T-cell system: a new cell growth model". *Science* 224 (4655): 1312-6.
2. Smith KA (May 1988). "Interleukin-2: inception, impact, and implications". *Science* 240 (4856): 1169-76.
3. Sakaguchi S, Sakaguchi N, Asano M, Itoh M, Toda M (August 1995). "Immunologic self-tolerance maintained by activated T cells expressing IL-2 receptor alpha-chains (CD25). Breakdown of a single mechanism of self-tolerance causes various autoimmune diseases". *J. Immunol.* 155 (3): 1151-64.
4. ThorntonAM, Shevach EM (July 1998). "CD4+CD25+ immunoregulatory T cells suppress polyclonal T cell activation in vitro by inhibiting interleukin 2 production". *J. Exp. Med.* 188 (2): 287-96.

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