

DESCRIPTION

Source *E. coli*-derived human IL-2 protein
Ala21-Thr153 (C145S) with and without an N-terminal Met
Accession # P60568.1
Proprietary point mutations

N-terminal Sequence Analysis Ala21 & Met-Ala21

Predicted Molecular Mass 15 kDa

SPECIFICATIONS

SDS-PAGE 12-14 kDa, under reducing conditions.

Activity Measured in a cell proliferation assay using NK-92 human natural killer lymphoma cells. The ED₅₀ for this effect is 0.0500-0.500 ng/mL.

Endotoxin Level <0.20 EU per 1 µg of the protein by the LAL method.

Purity >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

Formulation Lyophilized from a 0.2 µm filtered solution in Sodium Acetate with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute the 10 µg size at 100 µg/mL in water. Reconstitute all the other sizes at 500 µg/mL in water.

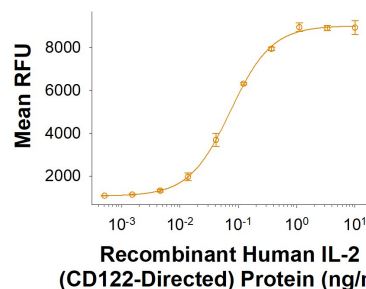
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

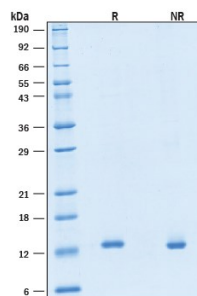
DATA

Bioactivity



Recombinant Human IL-2 (CD122-Directed) Protein Bioactivity. Recombinant Human IL-2 (CD122-Directed) Protein (Catalog # BT-002DBR) stimulates proliferation of NK-92 human natural killer lymphoma cells. The ED₅₀ for this effect is 0.0500-0.500 ng/mL.

SDS-PAGE



Recombinant Human IL-2 (CD122-Directed) Protein SDS-PAGE. 2 µg/lane of Recombinant Human IL-2 (CD122-Directed) Protein (Catalog # BT-002DBR) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 12-14 kDa, under reducing conditions.

BACKGROUND

CD122 directed IL-2 has a 7-fold increased binding affinity to the human IL-2 beta receptor while exhibiting significantly reduced affinity for the IL-2 alpha receptor. According to research by Levin (2012), this configuration results in more effective expansion of effector cells and less Treg (1). Our findings show that CD122 directed IL-2 improves immune cell expansion for workflows requiring significant amounts of IL-2. One concern with improving T cell expansion is the possibility of increasing the number of terminally differentiated and exhausted T cells with reduced anti-tumor activity. However, our studies have shown that CD122 directed IL-2 significantly improves T cell expansion without changing T cell phenotype or the expression of exhaustion markers.

References:

1. Levin, A., Bates, D., Ring, A. *et al.* (2012) Nature. 484:529.