Recombinant Human Lymphotoxin-α/TNF-β

Catalog Number: 211-TBB/CF

DESCRIPTION

Source	*E. coli*-derived Leu35-Leu205, with an N-terminal Met Accession # P01374
N-terminal Sequence Analysis	Met
Predicted Molecular Mass	19 kDa

SPECIFICATIONS

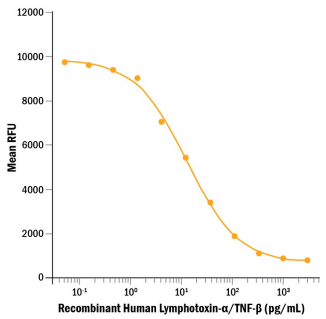
SDS-PAGE	17-19 kDa, reducing conditions
Activity	Measured in a cytotoxicity assay using L-929 mouse fibroblast cells in the presence of the metabolic inhibitor actinomycin D. Matthews, N. and M.L. Neale (1987) in Lymphokines and Interferons, A Practical Approach. Clemens, M.J. *et al.* (eds): IRL Press. 221. The ED_{50} for this effect is 4-20 pg/mL.
Endotoxin Level	<0.01 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 PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in PBS.
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.

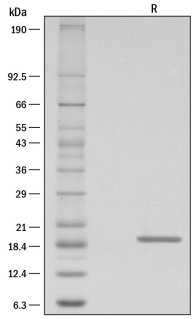
DATA

Bioactivity



Recombinant Human Lymphotoxin-α/TNF-β (Catalog # 211-TBB/CF) induces cytotoxicity in the L-929 mouse fibroblast cell line in the presence of the metabolic inhibitor actinomycin D. The ED_{50} for this effect is 4-20 pg/mL.

SDS-PAGE



1 µg/lane of Recombinant Human Lymphotoxin-α/TNF-β was resolved with SDS-PAGE under reducing (R) conditions and visualized by silver staining, showing a band at 19 kDa.

BACKGROUND

Lymphotoxin-α (LT-α), also known as Tumor Necrosis Factor-β (TNF-β), is a member of the TNF Superfamily. Human LT-α/TNF-β is a 22 kDa protein that shares 73% amino acid sequence identity with mouse and rat LT-α/TNF-β (1-3). Secreted LT-α forms homotrimers that bind and activate TNF RI/TNFRSF1A, TNF RII/TNFRSF1B, and HVEM/TNFRSF14 (4). LT-α/TNF-β also forms heterotrimers with plasma membrane-localized LT-β to bind and activate the LT-β R/TNFRSF3 (4). In addition to its cytotoxic action on tumor cells, LT-α/TNF-β mediates lymph node development, inflammation, and immune function (5-8). LT-α/TNF-β is expressed in activated T- and B lymphocytes and contributes to autoimmune disease (9, 10).

References:

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