Recombinant Mouse Lymphotoxin α2/β1
Catalog Number: 1008-LY

DESCRIPTION

Source Spodoptera frugiperda, Sf 21 (baculovirus)-derived
Leu34-Leu202 (LTα) & Gly136-Gly306 (LTβ)
Accession # P09225 (LTα) & P41155 (LTβ)

N-terminal Sequence Analysis Leu34 (LTα) & Gly136 (LTβ)
Structure / Form Noncovalently-linked heterotrimer
Predicted Molecular Mass 18.5 kDa (LTα), 18.4 kDa (LTβ)

SPECIFICATIONS

SDS-PAGE 18-22 kDa, reducing conditions
Endotoxin Level <1.0 EU per 1 μg of the protein by the LAL method.
Purity >95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 10 μg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.
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.

BACKGROUND

Lymphotoxin-α (LTα), also known as tumor necrosis factor (TNF) β, and lymphotoxin-β (LTβ) are members of the TNF family. LTα cDNA encodes a 202 amino acid (aa) secreted soluble protein with a 33 aa signal sequence. LTβ cDNA encodes a 306 aa type II membrane protein with an N-terminal cytoplasmic domain (residues 1-18), a transmembrane region (residues 29-48), and an extracellular domain (residues 49-306). Secreted LTα assembles as a soluble homotrimer, LTα₃. In addition, secreted LTα also complexes with the membrane associated LTβ to generate two types of heterotrimers, LTα₁/β₂ and LTα₂/β₁ (1). The soluble LTα₃ binds both TNF RI (p55) and TNF RII (p75). In contrast, the predominant membrane-bound heterotrimer, LTα₁/β₂, binds only to the lymphotoxin β receptor (LTβR). LTα₂/β₁ is capable of binding LTβR, TNF RI (p55), and TNF RII (p75). LT plays a role in normal lymphoid organogenesis (2, 3). Transgenic LTα knock-out mice exhibited a loss in lymph node development, a change in splenic architecture, and impaired germinal center formation (4). LT is expressed by activated naïve CD4 cells, unpolarized IL-2-secreting effectors, and Th1 effectors. A loss of LT expression and lack of TNF-α or TNF-β secretion is associated with prior exposure to IL-4 and a Th2 phenotype (5).

References: