

#8230 Store at -20C

Human Lymphotoxin- α /TNF- β /TNFSF1 (hLT- α)



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MW (kDa):
28

UniProt ID:
#P01374

Entrez-Gene Id:
4049

Background

Lymphotoxin- α (LT- α), also known as TNF- β , is a member of the TNF superfamily of proteins (1). NK cells, T cells, B cells, and lymphoid tissue-inducer cells express LT- α (1). LT- α can be secreted as a soluble homotrimer or form membrane bound heterotrimers with lymphotoxin- β (LT α 1 β 2 or LT α 2 β 1) which can be cleaved from the cell surface by matrix metalloproteases (1,2). Soluble LT- α binds to and signals through TNFR1/TNFR2, activating the canonical NF- κ B pathway (1). In contrast, LT α 1 β 2 heterodimers bind to the LT β R receptor and activate the noncanonical NF- κ B pathway (1). As a result, LT- α and TNF- α have overlapping functions. Soluble LT- α and LT α 1 β 2 play key roles in lymphangiogenesis (3). The LT α 1 β 2/LT β R axis is essential for the development of lymphoid tissue (1,3).

Endotoxin

Less than 0.01 ng endotoxin/1 μ g hLT- α .

Purity

>98% as determined by SDS-PAGE of 6 μ g reduced (+) and non-reduced (-) recombinant hLT- α . All lots are greater than 98% pure.

Source / Purification

Recombinant human LT- α (hLT- α) Pro36-Leu205 (Accession #NP_000586) was expressed in human 293 cells at Cell Signaling Technology.

Bioactivity

The bioactivity of recombinant hLT- α was determined in an L-929 cell viability assay. The ED₅₀ of each lot is between 15-150 pg/ml.

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Background References

1. Wolf, M.J. et al. (2010) *Oncogene* 29, 5006-18.
2. Young, J. et al. (2010) *Cytokine* 51, 78-86.
3. Mounzer, R.H. et al. (2010) *Blood* 116, 2173-82.

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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