

Gene Section

Short Communication

LTA (Lymphotoxin-A)

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Identity

Other names: TNFb Tumor Necrosis Factor-b; TNFSF1 TNF Superfamily member 1

HGNC (Hugo): LTA

Location: 6p21.3

DNA/RNA

Description

The human TNFb gene is located next to HLA-C and HLA-B loci in chromosome 6 (6p21.3). The gene spans 2005bp with 4 exons, which transcribes a TNFb mRNA with size of 1386nt.

Protein



Description

The human TNFb protein contains 205 amino acids. The soluble form of TNFb is usually a homotrimer with a relative molecular mass of 60 to 70 kDa, whereas the membrane form of TNFb is a heteromeric complex with lymphotoxin b (TNFc, LTb, TNFSF3). The human TNFb shares 35% identity and 50% homology in amino acid sequence with the human TNFa. The biological function of TNFb is mediated largely by TNFa receptor 1 and TNFa receptor 2. Recent studies suggested that TNFb can also recognize LIGHT (TNFSF14) receptor.

Expression

The main cellular source of TNFb is the activated lymphocytes in immune response.

Localisation

Cell membrane, extracellular soluble form, blood stream, and biological fluids.

Function

The human TNFb is an important cytokine involved in the development of secondary lymphoid organs and inflammatory responses.

Implicated in

Disease

The polymorphism of TNFb gene in either the coding region or the promoter region has been associated with Crohn disease and myocardial infarction.

References

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