# LTBR Antibody / Lymphotoxin-beta receptor (FY13221)

| Catalog No. | Formulation | Size |
|---|---|---|
| FY13221 | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml | 100 ug |

**Bulk quote request**

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| **Availability** | 1-2 days |
| **Species Reactivity** | Human |
| **Format** | Lyophilized |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit IgG |
| **Purity** | Immunogen affinity purified |
| **Buffer** | Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4. |
| **UniProt** | P36941 |
| **Applications** | Western Blot : 0.25-0.5ug/ml<br>ELISA : 0.1-0.5ug/ml |
| **Limitations** | This LTBR antibody is available for research use only. |

## Description

LTBR antibody detects Lymphotoxin-beta receptor, a cell surface receptor belonging to the tumor necrosis factor receptor (TNFR) superfamily that mediates immune signaling, inflammation, and lymphoid tissue organization. The UniProt recommended name is Lymphotoxin-beta receptor (LTBR). This receptor binds the lymphotoxin-alpha1/beta2 heterotrimer and LIGHT (TNFSF14), activating downstream pathways that regulate immune homeostasis and cell survival.

Functionally, LTBR antibody identifies a 435-amino-acid type I transmembrane receptor expressed on epithelial cells, stromal cells, and endothelial cells but absent from most hematopoietic cells. Upon ligand binding, LTBR triggers activation of NF-kappaB, JNK, and MAPK signaling pathways, leading to expression of cytokines, chemokines, and adhesion molecules. These signals promote lymphoid organogenesis, maintenance of high endothelial venules, and antiviral defense. LTBR signaling also induces controlled apoptosis during immune regulation and tissue remodeling.

The LTBR gene is located on chromosome 12p13.31 and is expressed in lymphoid tissues, intestinal epithelium, and vascular endothelium. It plays a central role in secondary lymphoid organ development, including the formation of lymph nodes and Peyer’s patches, as well as in maintaining immune compartmentalization within mucosal barriers.

Pathologically, dysregulation of LTBR contributes to autoimmune diseases, chronic inflammation, and tumor immunity. Hyperactivation promotes lymphoid neogenesis and ectopic germinal center formation in autoimmune conditions such as rheumatoid arthritis and multiple sclerosis, whereas impaired signaling weakens antiviral responses. In cancer, LTBR signaling can either promote tumor cell survival or enhance immune-mediated tumor clearance depending on context. Research using LTBR antibody supports studies in immunology, inflammation, and cancer biology.

LTBR antibody is validated for flow cytometry, western blotting, and immunohistochemistry to detect TNF receptor family proteins. NSJ Bioreagents provides LTBR antibody reagents optimized for immune regulation, receptor signaling, and inflammation research.

Structurally, Lymphotoxin-beta receptor contains four extracellular cysteine-rich domains for ligand binding and a cytoplasmic tail with TRAF-binding motifs that mediate signal transduction. Its modular design allows recruitment of adaptor proteins that determine specific pathway activation. This antibody facilitates detailed analysis of LTBR's roles in cytokine signaling, immune structure formation, and tissue homeostasis.

## Application Notes

Optimal dilution of the LTBR antibody should be determined by the researcher.

## Immunogen

E.coli-derived human LTBR recombinant protein (Position: Q31-Q404) was used as the immunogen for the LTBR antibody.

## Storage

After reconstitution, the LTBR antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.