

## LTBR Protein, Cynomolgus, Recombinant (hFc)

### General Information

Synonyms:	lymphotoxin $\beta$ receptor (TNFR superfamily, member 3);lymphotoxin beta receptor (TNFR superfamily, member 3)
Protein Construction:	A DNA sequence encoding the cynomolgus LTBR (F6V995) (Met1-Met225) was expressed with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Ser 28
Species:	Cynomolgus
Expression Host:	HEK293 Cells
Accession:	F6V995
Molecular Weight:	48.8 kDa (predicted); 64-70 kDa (reducing conditions)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

LTBR (lymphotoxin beta receptor (TNFR superfamily, member 3)) is a member of the tumor necrosis factor (TNF) family of receptors. The tumor necrosis factor receptor is a trimeric cytokine receptor that binds tumor necrosis factors. The receptor cooperates with an adaptor protein (such as TRADD, TRAF, RIP), which is important in determining the outcome of the response. LTBR is expressed on the surface of most cell types, including cells of

epithelial and myeloid lineages, but not on T and B lymphocytes. LTBR specifically binds the lymphotoxin membrane form (a complex of lymphotoxin-alpha and lymphotoxin-beta). LTBR and its ligand play a role in the development and organization of lymphoid tissue and transformed cells. Activation of this protein can trigger apoptosis. Not only does the LTBR help trigger apoptosis, but it can also lead to the release of the cytokine interleukin 8. Overexpression of LTBR in HEK293 cells increases IL-8 promoter activity and leads to IL-8 release. It is also essential for the development and organization of the secondary lymphoid organs and chemokine release.

### Reference

Summers deLuca L, et al. (2011) A LTBR signaling in dendritic cells induces a type I IFN response that is required for optimal clonal expansion of CD8+ T cells. *Proc Natl Acad Sci.* 108(5):2046-51.

Bista P, et al. (2010) TRAF3 controls activation of the canonical and alternative NF-kappaB by the lymphotoxin beta receptor. *J Biol Chem.* 285(17):12971-8.

Xu Y, et al. (2011) Adiponectin inhibits lymphotoxin-β receptor-mediated NF-κB signaling in human umbilical vein endothelial cells. *Biochem Biophys Res Commun.* 404(4):1060-4.

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