

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Lymphotoxin β R/TNFRSF3 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human (rh) 4-1BB, rhBAFF R, rhCD27, rhCD30, rhCD40, rhDR3, rhDR6, rhEDAR, rhFas, rhGITR, rhHVEM, recombinant mouse (m) Lymphotoxin β R, rhNGF R, rhOPG, rhRELT, rhTAJ, rhTNF RI or rhTNF RII is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 71319
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Lymphotoxin β R/TNFRSF3 Gln31-Met227 Accession # P36941
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 μ g/10 ⁶ cells	Human whole blood monocytes

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Lymphotoxin beta receptor (LT β R), also known as TNF RIII and TNF R-related protein (TNF Rrp) is a member of the TNF receptor superfamily, designated TNFRSF3. Human LT β R cDNA encodes a 435 amino acid (aa) residue type I membrane protein with a putative 30 aa residue signal peptide, a 193 aa residue extracellular domain and a 171 aa residue cytoplasmic domain. The extracellular domain of LT β R contains four cysteine-rich motifs characteristic of the TNF receptor superfamily. The cytoplasmic region of LT β R shares little sequence similarity with other TNF receptor family members, suggesting that different signaling mechanisms may be used. LT β R is expressed in a variety of tissues including visceral and lymphoid tissues. LT β R is also expressed by cell lines of monocytic, epithelial, and fibroblastic origins but not by T and B lymphocytes. Human and mouse LT β R share 76% aa sequence homology. The TNF family ligands that have been shown to bind and activate LT β R include LIGHT (also a ligand for HVEM) and the heterotrimeric lymphotoxin LT α 1/ β 2 or LT α 2/ β 1. Depending on the cell type, activation of LT β R has been shown to induce NF κ B activation, chemokine production, growth arrest, and apoptosis. *In vivo*, LT β R has been shown to play a critical role in controlling cellular immune functions and lymphoid organogenesis.

References:

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- Rennert, P.D. *et al.* (1998) Immunity **9**:71.
- Degli-Esposti, M.A. *et al.* (1997) J. Immunol **158**:1756.
- Mackay, F. *et al.* (1996) J. Biol. Chem. **271**:8618.
- Crowe, P.D. *et al.* (1994) Science **264**:707.

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