

# Human Lymphotoxin $\beta$ R/TNFRSF3 Alexa Fluor® 405-conjugated Antibody

Monoclonal Mouse IgG<sub>1</sub> Clone # 71319

Catalog Number: FAB629V

100  $\mu$ g

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Lymphotoxin $\beta$ 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 (rm) Lymphotoxin $\beta$ R, rhNGF R, rhOPG, rhRELT, rhTAJ, rhTNF RI or rhTNF RII is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 71319
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Lymphotoxin $\beta$ R/TNFRSF3 Gln31-Met227 Accession # P36941
<b>Conjugate</b>	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
<b>Formulation</b>	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
<b>Flow Cytometry</b>	0.25-1 $\mu$ g/10 <sup>6</sup> cells	Human whole blood monocytes

## PREPARATION AND STORAGE

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

## BACKGROUND

Lymphotoxin beta receptor (LT $\beta$ 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 $\beta$ 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 $\beta$ R contains four cysteine-rich motifs characteristic of the TNF receptor superfamily. The cytoplasmic region of LT $\beta$ R shares little sequence similarity with other TNF receptor family members, suggesting that different signaling mechanisms may be used. LT $\beta$ R is expressed in a variety of tissues including visceral and lymphoid tissues. LT $\beta$ R is also expressed by cell lines of monocytic, epithelial, and fibroblastic origins but not by T and B lymphocytes. Human and mouse LT $\beta$ R share 76% aa sequence homology. The TNF family ligands that have been shown to bind and activate LT $\beta$ R include LIGHT (also a ligand for HVEM) and the heterotrimeric lymphotoxin LT $\alpha$ 1/ $\beta$ 2 or LT $\alpha$ 2/ $\beta$ 1. Depending on the cell type, activation of LT $\beta$ R has been shown to induce NF $\kappa$ B activation, chemokine production, growth arrest, and apoptosis. *In vivo*, LT $\beta$ R has been shown to play a critical role in controlling cellular immune functions and lymphoid organogenesis.

## References:

- Zhai, Y. *et al.* (1998) J. Clin. Invest. **102**:1142.
- 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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