

## Ultra-LEAF™ Purified anti-human Lymphotoxin β Receptor (LT-βR) Antibody

<b>Catalog# / Size</b>	322011 / 100 µg 322012 / 1 mg
<b>Clone</b>	31G4D8
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Lymphotoxin beta receptor, Tumor necrosis factor receptor superfamily member 3
<b>Isotype</b>	Mouse IgG2b, κ
<b>Description</b>	LT-βR, also known as lymphotoxin beta receptor and tumor necrosis factor receptor superfamily member 3 is a 47 kD transmembrane protein containing 3 TNF receptor domains. The LT-βR is a receptor for the heterotrimeric lymphotoxin complex (composed of LTα and LTβ as well as LIGHT). LT-βR is highly expressed in the lung, liver, and kidney and moderately expressed in the heart and testes. LT-βR is weakly expressed in the brain, thymus, spleen, and lymph nodes. The cytoplasmic tail of LT-βR interacts with TRAF3, TRAF4, and TRAF5 as well as the hepatitis C virus core protein. Ligand binding to LT-βR has been shown to induce apoptosis (via TRAF3 and TRAF5) and play a role in the development of lymphoid organs. The 31G4D8 antibody has been shown to be useful for flow cytometry, Western blot, immunoprecipitation and ELISA (detection antibody). In addition, the 31G4D8 antibody is an agonistic antibody for the LT-βR capable of inducing apoptosis (with IFN-γ treatment).

### Product Details

<b>Verified Reactivity</b>	Human
<b>Reported Reactivity</b>	African Green, Cynomolgus, Rhesus
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	Human LT-βR Fc protein
<b>Formulation</b>	0.2 µm filtered in phosphate-buffered solution, pH 7.2, containing no preservative. Endotoxin level is < 0.01 EU/µg of the protein (< 0.001 ng/µg of the protein) as determined by the LAL test.
<b>Preparation</b>	The Ultra-LEAF™ (Low Endotoxin, Azide-Free) antibody was purified by affinity chromatography.
<b>Concentration</b>	The antibody is bottled at the concentration indicated on the vial, typically between 2 mg/mL and 3 mg/mL. Older lots may have also been bottled at 1 mg/mL. To obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C. This Ultra-LEAF™ solution contains no preservative; handle under aseptic conditions.
<b>Application</b>	<a href="#">FC - Quality tested</a> <a href="#">WB, IP, Apop - Reported in the literature, not verified in house</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a> . For flow cytometric staining, the suggested use of this reagent is ≤ 2.0 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Application Notes</b>	Additional reported applications (for the relevant formats) include: Western blotting <sup>1</sup> , immunoprecipitation <sup>1</sup> , ELISA detection <sup>1</sup> , induction of apoptosis <sup>2</sup> . The biotinylated 31G4D8 antibody is useful as a detection antibody for a sandwich ELISA assay, when used in conjunction with the purified 36G9G3 antibody (Cat. No. 322101/322102) as capture antibody. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 322003/322004).
<b>Application References</b>	1. Developer's communication 2. Chen M-C, <i>et al.</i> 2003. <i>J. Biol. Chem.</i> 278:16073.
<b>(PubMed link indicates</b>	

## BioLegend citation)

RRID AB\_2832630 (BioLegend Cat. No. 322011)  
AB\_2832631 (BioLegend Cat. No. 322012)

## Antigen Details

---

<b>Structure</b>	Member of the TNF receptor superfamily; transmembrane receptor containing 3 TNF receptor domains, predicted molecular weight approximately 47 kD
<b>Distribution</b>	Highly expressed in lung, liver, and kidney. Moderate expression in heart and testes; weak expression in brain, thymus, spleen, and lymph nodes.
<b>Function</b>	Promotes apoptosis via TRAF3 and TRAF5, plays a role in the development of lymphoid organs
<b>Interaction</b>	Receptor for heterotrimeric lymphotoxin complex (composed of LT $\alpha$ and LT $\beta$ as well as LIGHT). Also interacts with TRAF3, TRAF4, and TRAF5 as well as hepatitis C virus core protein
<b>Cell Type</b>	Embryonic Stem Cells
<b>Biology Area</b>	Immunology, Stem Cells
<b>Molecular Family</b>	Cytokine/Chemokine Receptors
<b>Antigen References</b>	1. Crowe PD, <i>et al.</i> 1994 <i>Science</i> 264:707.
<b>Gene ID</b>	<a href="#">4055</a>

## Related Protocols

---

[Cell Surface Flow Cytometry Staining Protocol](#)

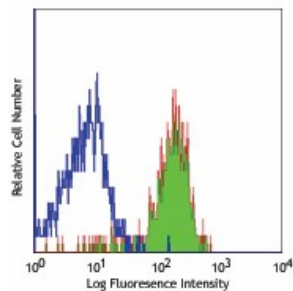
## Other Formats

---

Purified anti-human Lymphotoxin beta receptor (LT- $\beta$ R), PE anti-human Lymphotoxin beta receptor (LT- $\beta$ R), Ultra-LEAF™ Purified anti-human Lymphotoxin  $\beta$  Receptor (LT- $\beta$ R), TotalSeq™-C0932 anti-human Lymphotoxin  $\beta$  Receptor (LT- $\beta$ R)

## Product Data

---



Human peripheral blood monocytes stained with Ultra-LEAF™ purified 31G4D8, followed by biotinylated anti-mouse IgG and Sav-PE

For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

\*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, [www.biolegend.com/ordering#license](http://www.biolegend.com/ordering#license)). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 [www.biolegend.com](http://www.biolegend.com)  
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587

