

**DESCRIPTION**

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse LIGHT/TNFSF14 in Western blots. In Western blots, approximately 50% cross-reactivity with recombinant human LIGHT is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse LIGHT/TNFSF14 Asp72-Val239 Accession # Q9QYH9
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.1 µg/mL	Recombinant Mouse LIGHT/TNFSF14 (Catalog # 1794-LT)

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

LIGHT (lymphotoxin-like, exhibits inducible expression, and competes with HSV glycoprotein D for HVEM, a receptor expressed by T lymphocytes) is a member of the TNF superfamily and is designated TNFSF14. The gene for mouse LIGHT encodes a 239 amino acid residue (aa) type II transmembrane glycoprotein that contains a 37 aa N-terminal cytoplasmic domain, a 21 aa transmembrane region, and a 181 aa extracellular domain. A soluble form of mouse LIGHT is generated from the membrane form by proteolytic processing. Similar to other TNF ligand family members, LIGHT is assembled as a homotrimer. Mouse and human LIGHT share 71% aa sequence identity.

LIGHT is expressed by activated lymphocytes, natural killer cells, immature dendritic cells, monocytes and granulocytes. Mouse LIGHT binds and signals via two distinct TNF receptor superfamily members, including the herpes virus entry mediator (HVEM/TNFRSF14) and the lymphotoxin β receptor (LTβ R/TNFRSF3). In humans, LIGHT also binds the soluble human decoy receptor 3 (DcR3/TNFRSF6B). Signaling from LTβ R, which also binds LTαβ, induces apoptosis and the production of various cytokines. LIGHT-LTβ R signaling also plays a role in mesenteric lymph node organogenesis, and restoration of secondary lymphoid structure and function. Signaling from HVEM, which also binds LTα, co-stimulates T-helper cell type 1 (TH1) immune responses, enhances Cytotoxic T Lymphocytes (CTL)-mediated tumor immunity, and regulates allogeneic T cell activation and allograft rejection. Blockade of LIGHT-HVEM signaling has been shown to prevent graft versus host disease.

**References:**

1. Granger, S.W. and S. Rickert (2003) Cytokine Growth Factor Rev. 14:289.