Human LIGHT/TNFSF14 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF664

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human LIGHT/TNFSF14 in direct ELISAs and Western blots. In Western blots, approximately 5% cross-reactivity with recombinant human (rh) APRIL is observed and less than 1% cross-reactivity with rhFas Ligand, rhTRAIL, and rhTNF-α is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human LIGHT/TNFSF14 Asp74-Val240 Accession # O43557
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

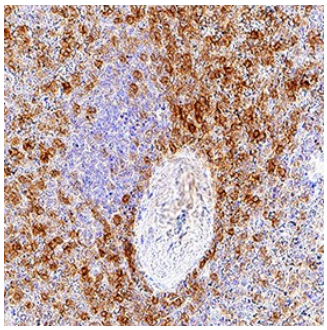
APPLICATIONS

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
Western Blot	0.1 µg/mL	Recombinant Human LIGHT/TNFSF14 (Catalog # 664-LI)
Immunohistochemistry	3-15 µg/mL	See Below
Neutralization	Measured by its ability to neutralize LIGHT/TNFSF14-induced proliferation in the HUVEC human umbilical vein endothelial cells. Conn, G. *et al*. (1990) Proc. Natl. Acad. Sci USA **87**:1323. The Neutralization Dose (ND_{50}) is typically 5-20 ng/mL in the presence of 10 ng/mL Recombinant Human LIGHT/TNFSF14.	

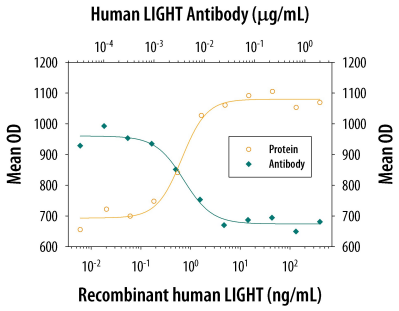
DATA

Immunohistochemistry



LIGHT/TNFSF14 in Human Spleen. LIGHT/TNFSF14 was detected in immersion fixed paraffin-embedded sections of human spleen using Goat Anti-Human LIGHT/TNFSF14 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF664) at 3 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to splenocytes. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Neutralization



Cell Proliferation Induced by LIGHT/TNFSF14 and Neutralization by Human LIGHT/TNFSF14 Antibody. Recombinant Human LIGHT/TNFSF14 (Catalog # 664-LI) induces proliferation in the HUVEC human umbilical vein endothelial cells in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Human LIGHT/TNFSF14 (10 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human LIGHT/TNFSF14 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF664). The ND_{50} is typically 5-20 ng/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Human LIGHT is a type II membrane protein that is a member of the TNF superfamily. LIGHT is an acronym which stands for "is homologous to lymphotoxins, exhibits inducible expression, and competes with HSV glycoprotein D for HVEM, a receptor expressed by T lymphocytes". LIGHT has also been called HVEM-L and LT-γ. Under the new TNF nomenclature, it is called TNFSF14. LIGHT is a 240 amino acid (aa) protein that contains a 37 aa cytoplasmic domain, a 22 aa transmembrane region, and a 181 aa extracellular domain. Similar to other TNF ligand family members, LIGHT is predicted to assemble as a homotrimer. LIGHT is produced by activated T cells and was first identified by its ability to compete with HSV glycoprotein D for HVEM binding. LIGHT has also been shown to bind to the lymphotoxin beta receptor (LTβR) and the decoy receptor (DcR3/TR6). LIGHT overexpression in tumor cells induces apoptosis, which can be enhanced by IFN-γ. The full roles of LIGHT remain to be elucidated.

References:

1. Mauri, D.N. *et al.* (1998) Immunity **8**:21.
2. Zhai, Y. *et al.* (1998) J. Clin. Invest. **102**:1142.
3. Harrop, J.A. *et al.* (1998) J. Biol. Chem. **273**:27548.
4. Yu, K-Y. *et al.* (1999) J. Biol. Chem. **274**:13733.

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