

DESCRIPTION

Species Reactivity	Mouse
Specificity	Stains mouse LIGHT/TNFSF14 transfectants but not irrelevant transfectants in flow cytometry.
Source	Recombinant Monoclonal Rat IgG _{2A} Clone # 885310
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse LIGHT Asp72-Val239 Accession # Q9QYH9
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 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 µg/10 ⁶ cells	HEK293 human embryonic kidney cell line transfected with mouse LIGHT/TNFSF14 and eGFP

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

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.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.