

LIGHT (4E3): sc-293480

BACKGROUND

Herpes virus entry mediator (HVEM), a type I transmembrane protein, is a member of the TNF receptor superfamily. HVEM mediates the entry of herpes simplex virus (HSV) 1 and 2 into T lymphocytes by serving as an attachment site for the HSV envelope glycoprotein D (gD). HVEM also binds two cellular ligands, secreted lymphotoxin α and light. LIGHT is a member of the TNF superfamily produced by activated T cells. This type II transmembrane protein competes with HSV glycoprotein D for binding to HVEM. LIGHT is closely related in sequence to lymphotoxin β (LT β) and can also bind to the LT β receptor. LIGHT is also known to induce apoptosis and suppress tumor formation. The gene encoding LIGHT maps to human chromosome 19p13.3.

REFERENCES

1. Montgomery, R.I., et al. 1996. Herpes simplex virus-1 entry into cells mediated by a novel member of the TNF/NGF receptor family. *Cell* 87: 427-436.
2. Marsters, S.A., et al. 1997. Herpes virus entry mediator, a member of the tumor necrosis factor receptor (TNFR) family, interacts with members of the TNFR-associated factor family and activates the transcription factors NF κ B and AP-1. *J. Biol. Chem.* 30: 14029-14032.
3. Whitbeck, J.C., et al. 1997. Glycoprotein D of herpes simplex virus (HSV) binds directly to HVEM, a member of the tumor necrosis factor receptor superfamily and a mediator of HSV entry. *J. Virol.* 71: 6083-6093.
4. Mauri, D.N., et al. 1998. LIGHT, a new member of the TNF superfamily, and lymphotoxin α are ligands for herpesvirus entry mediator. *Immunity* 8: 21-30.
5. Zhai, Y., et al. 1998. LIGHT, a novel ligand for lymphotoxin β receptor and TR2/HVEM induces apoptosis and suppresses *in vivo* tumor formation via gene transfer. *J. Clin. Invest.* 15: 1142-1151.
6. Granger, S.W., et al. 2001. Genomic characterization of LIGHT reveals linkage to an immune response locus on chromosome 19p13.3 and distinct isoforms generated by alternate splicing or proteolysis. *J. Immunol.* 167: 5122-5128.

CHROMOSOMAL LOCATION

Genetic locus: TNFSF14 (human) mapping to 19p13.3.

SOURCE

LIGHT (4E3) is a mouse monoclonal antibody raised against amino acids 61-170 representing partial length LIGHT of human origin.

PRODUCT

Each vial contains 100 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

LIGHT (4E3) is recommended for detection of LIGHT of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for LIGHT siRNA (h): sc-39674, LIGHT shRNA Plasmid (h): sc-39674-SH and LIGHT shRNA (h) Lentiviral Particles: sc-39674-V.

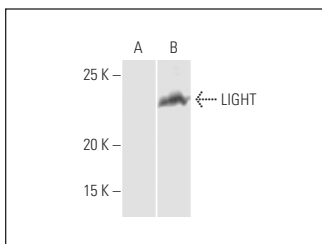
Molecular Weight of LIGHT: 29 kDa.

Positive Controls: LIGHT transfected 293T whole cell lysate.

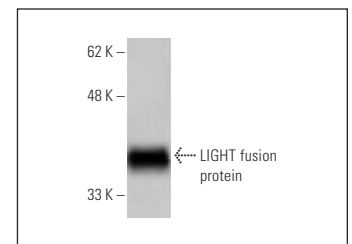
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



LIGHT (4E3): sc-293480. Western blot analysis of LIGHT expression in non-transfected (A) and LIGHT transfected (B) 293T whole cell lysates.



LIGHT (4E3): sc-293480. Western blot analysis of human recombinant LIGHT fusion protein.

SELECT PRODUCT CITATIONS

1. Ohe, R., et al. 2021. Nodal histiocytic sarcoma with prominent eosinophilic infiltration: expression of eotaxin-2 on tumor cells. *Diagn. Pathol.* 16: 6.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.