

HVEM (h3): 293T Lysate: sc-170825

BACKGROUND

HVEM (herpes virus entry mediator A), also known as TR2, ATAR, HVEA, LIGHTR or TNFRSF14 (tumor necrosis factor receptor superfamily, member 14), is a 283 amino acid single-pass type I membrane protein that is widely expressed, with highest expression in lung, spleen and thymus. 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 acts as a receptor for two cellular ligands, secreted lymphotoxin and LIGHT. A member of the TNF superfamily produced by activated T-cell, LIGHT is suggested to induce apoptosis and suppress tumor formation. Consisting of three TNFR-Cys repeats, HVEM plays a critical role in HSV pathogenesis. HVEM is encoded by a gene located on human chromosome 1p36.32, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome.

REFERENCES

1. Montgomery, R.L., 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. Herpesvirus 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 NFκB 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. Costello, R.T., et al. 2003. Stimulation of non-Hodgkin's lymphoma via HVEM: an alternate and safe way to increase FAS-induced apoptosis and improve tumor immunogenicity. *Leukemia* 17: 2500-2507.
7. Granger, S.W. and Rickert, S. 2003. LIGHT-HVEM signaling and the regulation of T cell-mediated immunity. *Cytokine Growth Factor Rev.* 14: 289-296.
8. Ono, E., et al. 2004. Enhanced resistance to herpes simplex virus type 1 infection in transgenic mice expressing a soluble form of herpesvirus entry mediator. *Virology* 320: 267-275.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: TNFRSF14 (human) mapping to 1p36.32.

PRODUCT

HVEM (h3): 293T Lysate represents a lysate of human HVEM transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

HVEM (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive HVEM antibodies. Recommended use: 10-20 µl per lane.

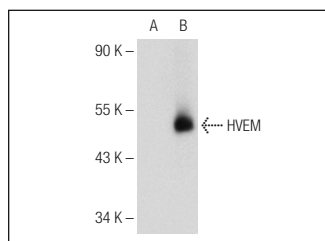
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

HVEM (D-5): sc-365971 is recommended as a positive control antibody for Western Blot analysis of enhanced human HVEM expression in HVEM transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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.

DATA



HVEM (D-5): sc-365971. Western blot analysis of HVEM expression in non-transfected: sc-117752 (A) and human HVEM transfected: sc-170825 (B) 293T whole cell lysates.

RESEARCH USE

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