

# HVEM (D-5): sc-365971

## 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 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome.

## 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. 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.

## CHROMOSOMAL LOCATION

Genetic locus: TNFRSF14 (human) mapping to 1p36.32; Tnfrsf14 (mouse) mapping to 4 E2.

## SOURCE

HVEM (D-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 259-287 near the C-terminus of HVEM of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HVEM (D-5) is available conjugated to agarose (sc-365971 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365971 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365971 PE), fluorescein (sc-365971 FITC), Alexa Fluor<sup>®</sup> 488 (sc-365971 AF488), Alexa Fluor<sup>®</sup> 546 (sc-365971 AF546), Alexa Fluor<sup>®</sup> 594 (sc-365971 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-365971 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-365971 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-365971 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365971 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor<sup>®</sup> is a trademark of Molecular Probes, Inc., Oregon, USA

## STORAGE

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

## APPLICATIONS

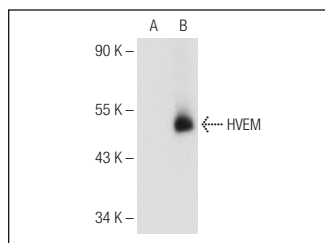
HVEM (D-5) is recommended for detection of HVEM of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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 HVEM siRNA (h): sc-43855, HVEM siRNA (m): sc-44372, HVEM shRNA Plasmid (h): sc-43855-SH, HVEM shRNA Plasmid (m): sc-44372-SH, HVEM shRNA (h) Lentiviral Particles: sc-43855-V and HVEM shRNA (m) Lentiviral Particles: sc-44372-V.

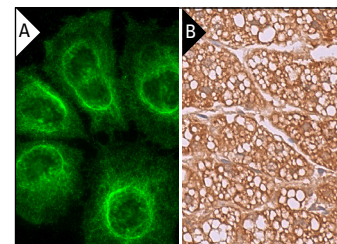
Molecular Weight of HVEM: 30 kDa.

Positive Controls: HVEM (h3): 293T Lysate: sc-170825.

## 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.



HVEM (D-5): sc-365971. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing membrane and cytoplasmic staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

1. Steukers, L., et al. 2014. Mimicking herpes simplex virus 1 and herpes simplex virus 2 mucosal behavior in a well-characterized human genital organ culture. *J. Infect. Dis.* 210: 209-213.
2. Waldemer-Streyer, R.J. and Chen, J. 2015. Myocyte-derived Tnfrsf14 is a survival factor necessary for myoblast differentiation and skeletal muscle regeneration. *Cell Death Dis.* 6: e2026.
3. Chucair-Elliott, A.J., et al. 2016. IL-6 contributes to corneal nerve degeneration after herpes simplex virus type I infection. *Am. J. Pathol.* 186: 2665-2678.
4. Cheng, T., et al. 2019. Herpes virus entry mediator (HVEM) expression promotes inflammation/organ injury in response to experimental indirect-acute lung injury. *Shock* 51: 487-494.
5. Liu, Y., et al. 2021. Harringtonine inhibits herpes simplex virus type 1 infection by reducing herpes virus entry mediator expression. *Front. Microbiol.* 12: 722748.

## RESEARCH USE

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