10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

TNFRSF14 Antibody

Catalog # ASC10410

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q92956
Other Accession	Q92956, 13878821
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	30392
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TNFRSF14 antibody can be used for the detection of TNFRSF14 by Western blot at 1 - 2 □g/mL. Antibody can also be used for immunohistochemistry starting at 1 □g/mL. For immunofluorescence start at 10 □g/mL.

Additional Information

Gene ID	8764
Other Names	TNFRSF14 Antibody: TR2, ATAR, HVEA, HVEM, CD270, LIGHTR, UNQ329/PRO509, Tumor necrosis factor receptor superfamily member 14, Herpes virus entry mediator A, Herpesvirus entry mediator A, tumor necrosis factor receptor superfamily, member 14 (herpesvirus entry mediator)
Target/Specificity	TNFRSF14; Multiple isoforms of TNFRSF14 are known to exist.
Reconstitution & Storage	TNFRSF14 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	TNFRSF14 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TNFRSF14 (HGNC:11912)
Function	Receptor for four distinct ligands: The TNF superfamily members TNFSF14/LIGHT and homotrimeric LTA/lymphotoxin-alpha and the immunoglobulin superfamily members BTLA and CD160, altogether defining a complex stimulatory and inhibitory signaling network (PubMed:10754304, PubMed:18193050, PubMed:23761635, PubMed:9462508). Signals via the TRAF2-TRAF3 E3 ligase pathway to promote immune cell survival and differentiation (PubMed:19915044, PubMed:9153189, PubMed:9162022).

	Participates in bidirectional cell-cell contact signaling between antigen presenting cells and lymphocytes. In response to ligation of TNFSF14/LIGHT, delivers costimulatory signals to T cells, promoting cell proliferation and effector functions (PubMed:10754304). Interacts with CD160 on NK cells, enhancing IFNG production and anti-tumor immune response (PubMed:23761635). In the context of bacterial infection, acts as a signaling receptor on epithelial cells for CD160 from intraepithelial lymphocytes, triggering the production of antimicrobial proteins and pro-inflammatory cytokines (By similarity). Upon binding to CD160 on activated CD4+ T cells, down- regulates CD28 costimulatory signaling, restricting memory and alloantigen-specific immune response (PubMed:18193050). May interact in cis (on the same cell) or in trans (on other cells) with BTLA (By similarity) (PubMed:19915044). In cis interactions, appears to play an immune regulatory role inhibiting in trans interactions in naive T cells to maintain a resting state. In trans interactions, can predominate during adaptive immune response to provide survival signals to effector T cells (By similarity) (PubMed:19915044).
Cellular Location	Cell membrane; Single-pass type I membrane protein
Tissue Location	Widely expressed, with the highest expression in lung, spleen and thymus. Expressed in a subpopulation of B cells and monocytes (PubMed:18193050). Expressed in naive T cells (PubMed:19915044).

Background

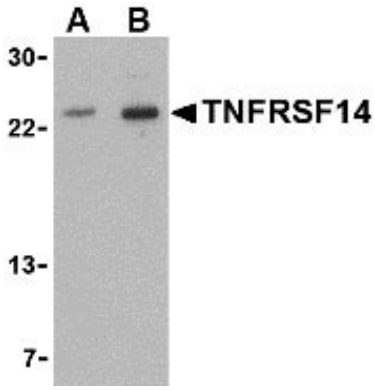
TNFRSF14 Antibody: Tumor necrosis factor receptor (TNFR) superfamily members are defined by cysteine-rich domains in their extracellular regions that bind TNF-related ligands that share a common structural homology in their extracellular domain. TNFRSF14 was initially identified as the Herpesvirus entry mediator and upon binding to the herpes simplex virus (HSV) envelope glycoprotein D or either of its natural ligands LIGHT and lymphotoxin alpha (LT), activates the transcription factors NF-κB and AP-1. Activation of this signal transduction pathway in T cells stimulates T cell proliferation and cytokine production, leading to inflammation and enhanced CTL-mediated tumor immunity, suggesting that these proteins may be useful as potential targets for controlling cellular immune responses.

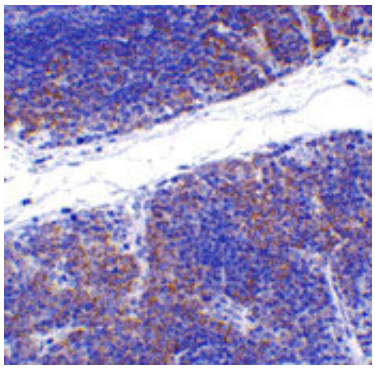
References

Montgomery RI, Warner MS, Lum BJ, et al. Herpes simplex virus-1 entry into cells mediated by a novel member of the TNF/NGF receptor family. Cell 1996; 87:427-36.
Montgomery RI, Warner MS, Lum BJ, et al. Herpes simplex virus-1 entry into cells mediated by a novel member of the TNF/NGF receptor family. Cell 1996; 87:427-36.
Marsters SA, Ayres TM, Skubatch M, et al. 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 NF-κB and AP-1. J. Biol. Chem. 1997; 272:14029-32.
Mauri DN, Ebner R, Montgomery RI, et al. LIGHT, a new member of the TNF superfamily, and lymphotoxin alpha are ligands for herpesvirus entry mediator. Immunity 1998; 8:21-30.

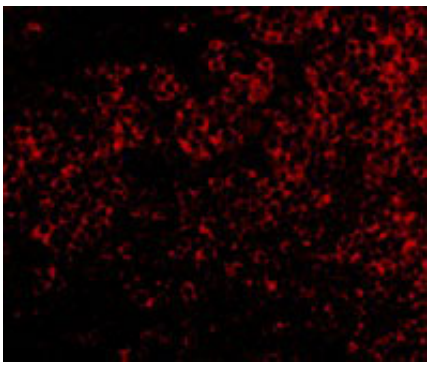
Images

Western blot analysis of TNFRSF14 in mouse thymus tissue lysate with TNFRSF14 antibody at (A) 1 and (B) 2 µg/mL.





Immunohistochemistry of TNFRSF14 in mouse thymus tissue with TNFRSF14 antibody at 1 µg/mL.



Immunofluorescence of TNFRSF14 in Mouse Thymus tissue with TNFRSF14 antibody at 10 µg/mL.