

CRTAM (M-56): sc-99202

BACKGROUND

Class-I MHC-restricted T cell associated molecule (CRTAM) is a receptor that is primarily expressed on activated cytotoxic lymphocytes, where it may play a role in their adhesion, interaction or migration. It is one of the most highly expressed surface markers detected on activated human NK T cells and CD8 T cells, suggesting its use as a diagnostic tool in various human viral and autoimmune diseases. CRTAM binds Nectin-like protein 2 (Nectin2), which is involved in IL-22 expression regulation. This Nectin2/CRTAM molecular pair may regulate cell/cell interactions and may play a role in neuronal interactions. CRTAM is also highly expressed in Purkinje neurons in the cerebellum.

REFERENCES

- Kennedy, J., Vicari, A.P., Saylor, V., Zurawski, S.M., Copeland, N.G., Gilbert, D.J., Jenkins, N.A. and Zlotnik, A. 2000. A molecular analysis of NK T cells: identification of a class-I restricted T cell-associated molecule (CRTAM). *J. Leukoc. Biol.* 67: 725-734.
- Shingai, T., Ikeda, W., Kakunaga, S., Morimoto, K., Takekuni, K., Itoh, S., Satoh, K., Takeuchi, M., Imai, T., Monden, M. and Takai, Y. 2003. Implications of Nectin-like molecule-2/IGSF4/RA175/SglIGSF/TSLC1/SynCAM1 in cell-cell adhesion and transmembrane protein localization in epithelial cells. *J. Biol. Chem.* 278: 35421-35427.
- Boles, K.S., Barchet, W., Diacovo, T., Cella, M., Colonna, M. 2005. The tumor suppressor TSLC1/NECL2 triggers NK cell and CD8⁺ T cell responses through the cell surface receptor CRTAM. *Blood* 106: 779-786.
- Galibert, L., Diemer, G.S., Liu, Z., Johnson, R.S., Smith, J.L., Walzer, T., Comeau, M.R., Rauch, C.T., Wolfson, M.F., Sorensen, R.A., Van der Vuurst de Vries, A.R., Branstetter, D.G., Koelling, R.M., Scholler, J., Fanslow, W.C., Baum, P.R., Derry, J.M. and Yan, W. 2005. Nectin-like protein 2 defines a subset of T cell zone dendritic cells and is a ligand for class-I-restricted T cell-associated molecule. *J. Biol. Chem.* 280: 21955-21964.
- Patino-Lopez, G., Hevezi, P., Lee, J., Willhite, D., Verge, G.M., Lechner, S.M., Ortiz-Navarrete, V. and Zlotnik, A. 2005. Human class-I restricted T cell associated molecule is highly expressed in the cerebellum and is a marker for activated NK T and CD8⁺ T lymphocytes. *J. Neuroimmunol.* 171: 145-155.
- Arase, N., Takeuchi, A., Unno, M., Hirano, S., Yokosuka, T., Arase, H. and Saito, T. 2005. Heterotypic interaction of CRTAM with Nectin2 induces cell adhesion on activated NK cells and CD8⁺ T cells. *Int. Immunol.* 17: 1227-1237.

CHROMOSOMAL LOCATION

Genetic locus: CRTAM (human) mapping to 11q24.1; Crtam (mouse) mapping to 9 A5.1.

SOURCE

CRTAM (M-56) is a rabbit polyclonal antibody raised against amino acids 287-342 mapping near the C-terminus of CRTAM of mouse origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CRTAM (M-56) is recommended for detection of CRTAM of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CRTAM (M-56) is also recommended for detection of CRTAM in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for CRTAM siRNA (h): sc-60451, CRTAM siRNA (m): sc-60452, CRTAM shRNA Plasmid (h): sc-60451-SH, CRTAM shRNA Plasmid (m): sc-60452-SH, CRTAM shRNA (h) Lentiviral Particles: sc-60451-V and CRTAM shRNA (m) Lentiviral Particles: sc-60452-V.

Molecular Weight of CRTAM: 80 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

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



Try **CRTAM (C-12): sc-390581**, our highly recommended monoclonal alternative to CRTAM (M-56).