SANTA CRUZ BIOTECHNOLOGY, INC.

CD161 (M-15): sc-70150

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Natural killer (NK) and T cells express a superfamily of proteins with structural features of C-type lectins. T cells bearing natural killer receptors (NKRs) such as CD94 and CD161 are present in psoriasis. CD161 mediates NK cell activation and functions as an activating receptor. CD161 is a prototypic marker of NK cells, although it is also found on a subset of $CD8^+$ T cells. The expression of NK receptors on $CD8^+$ T cells can be considered a marker of cytotoxic effector T cells that are expanded *in vivo* after antigenic activation leading to extensive proliferation. The transcription, mRNA accumulation and surface expression of CD161, a molecule involved in triggering cytotoxicity, is specifically upregulated by IL-12.

REFERENCES

1. Koo, G.C. and Peppard, J.R. 1985. Establishment of monoclonal anti-NK-1.1 antibody. Hybridoma 3: 301-303.
2. Koo, G.C., et al. 1987. The $NK\text{-}1.1^-$ mouse: a model to study differentiation of murine NK cells. J. Immunol. 137: 3742-3747.
3. Sentman, C.L., et al. 1990. Pan natural killer cell monoclonal antibodies and their relationship to the NK-1.1 antigen. Hybridoma 8: 605-614.
4. Garni-Wagner, B.A., et al. 1993. A novel function-associated molecule related to non-MHC-restricted cytotoxicity mediated by activated natural killer cells and T cells. J. Immunol. 151: 60-70.
5. Yokoyama, W.M. and Seaman, W.E. 1993. The Ly-49 and NKR-P1 gene families encoding lectin-like receptors on natural killer cells: the NK gene complex. Annu. Rev. Immunol. 11: 613-635.
6. Vicari, A.P. and Zlotnik, A. 1996. Mouse $NK\text{-}1.1^+$ T cells: a new family of T cells. Immunol. Today 17: 71-76.
7. Reichlin, A. and Yokoyama, W.M. 1998. Natural killer cell proliferation induced by anti-NK-1.1 and IL-2. Immunol. Cell Biol. 76: 143-152.
8. Poulton, L.D., et al. 2001. Cytometric and functional analyses of NK and NKT cell deficiencies in NOD mice. Int. Immunol. 13: 887-896.
9. Routes, J.M., et al. 2001. MHC class I molecules on Adenovirus E1A-expressing tumor cells inhibit NK cell killing but not NK cell-mediated tumor rejection. Int. Immunol. 13: 1301-1307.

CHROMOSOMAL LOCATION

Genetic locus: Klrb1 (mouse) mapping to 6 F3.

SOURCE

CD161 (M-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal extracellular domain of CD161 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-70150 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CD161 (M-15) is recommended for detection of CD161 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for CD161 siRNA (m): sc-72139, CD161 shRNA Plasmid (m): sc-72139-SH and CD161 shRNA (m) Lentiviral Particles: sc-72139-V.

Molecular Weight of CD161: 25 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Doloff, J.C. and Waxman, D.J. 2012. VEGF receptor inhibitors block the ability of metronomically dosed cyclophosphamide to activate innate immunity-induced tumor regression. Cancer Res. 72: 1103-1115.
2. Doloff, J.C., et al. 2014. Anti-tumor innate immunity activated by intermittent metronomic cyclophosphamide treatment of 9L brain tumor xenografts is preserved by anti-angiogenic drugs that spare VEGF receptor 2. Mol. Cancer 13: 158.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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