

CD161 (HP-3G10): sc-69891

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 (NKR) 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., et al. 1984. Establishment of monoclonal anti-Nk-1.1 antibody. *Hybridoma* 3: 301-303.
2. Koo, G.C., et al. 1986. The NK-1.1⁺ mouse: a model to study differentiation of murine NK cells. *J. Immunol.* 137: 3742-3747.
3. Sentman, C.L., et al. 1989. 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., et al. 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., et al. 1996. Mouse NK1.1⁺ T cells: a new family of T cells. *Immunol. Today* 17: 71-76.
7. Reichlin, A., et al. 1998. Natural killer cell proliferation induced by anti-NK1.1 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 (human) mapping to 12p13.31.

SOURCE

CD161 (HP-3G10) is a mouse monoclonal antibody raised against NK cells of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD161 (HP-3G10) is available conjugated to either phycoerythrin (sc-69891 PE) or fluorescein (sc-69891 FITC), 200 µg/ml, for IF, IHC(P) and FCM.

APPLICATIONS

CD161 (HP-3G10) is recommended for detection of CD161 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for CD161 siRNA (h): sc-42935, CD161 shRNA Plasmid (h): sc-42935-SH and CD161 shRNA (h) Lentiviral Particles: sc-42935-V.

Molecular Weight of CD161: 25 kDa.

Positive Controls: NK-92 whole cell lysate: sc-364788.

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.

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 for detailed protocols and support products.