SANTA CRUZ BIOTECHNOLOGY, INC.

Nectin 2 (B-C12): sc-65333

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Nectin is a Ca^{2+}-independent homophilic cell adhesion molecule that belongs to the immunoglobulin superfamily. Human Nectin is identical to the poliovirus receptor-related protein (PRR) and is identified to be the α herpesvirus entry mediator. Nectin constitutes a family consisting of at least Nectin 1, 2 and 3. Nectin 2 is ubquitously expressed, with the highest levels of expression in some human neuronal cell lines, fibroblastic cells, keratinocytes and primary activated T lymphocytes. Each member has two or three splicing variants. Nectin 2, also designated as PRR2/HveB, has two splicing variants, Nectin 2α (short form) and 2δ (long form). Both Nectin 2α and 2δ have a C-terminal conserved motif (E/A-X-Y-V). This motif interacts with the PDZ domain of the F-Actin-binding protein, afadin, through which it is linked to the Actin cytoskeleton. The extracellular regions of the splicing variants are identical, but their transmembrane regions and cytoplasmic regions are unique. Nectin 2 mediates the entry of three mutant herpes simplex virus type 1 (HSV-1) strains that do not use HveA as co-receptor, but not wildtype HSV-1 strains. Nectin 2 also mediates the entry of HSV-2 and pseudorabies virus, but not bovine herpes virus type 1. Nectin 2δ is tyrosine phosphorylated in response to cell-cell adhesion.

REFERENCES

1. Lopez, M., et al. 1995. Complementary DNA characterization and chromosomal localization of a human gene related to the poliovirus receptor-encoding gene. Gene 155: 261-265.
2. Eberle, F., et al. 1995. The human PRR2 gene, related to the human poliovirus receptor gene (PVR), is the true homolog of the murine MPH gene. Gene 159: 267-272.
3. Warner, M.S., et al. 1998. A cell surface protein with herpesvirus entry activity (HveB) confers susceptibility to infection by mutants of herpes simplex virus type 1, herpes simplex virus type 2 and pseudorabies virus. Virology 246: 179-189.
4. Kikyo, M., et al. 2000. Cell-cell adhesion-mediated tyrosine phosphorylation of Nectin 2δ, an immunoglobulin-like cell adhesion molecule at adherens junctions. Oncogene 19: 4022-4028.
5. Satoh-Horikawa, K., et al. 2000. Nectin 3, a new member of immunoglobulin-link cell adhesion molecules that shows homophilic and heterophilic cell-cell adhesion activities. J. Biol. Chem. 275: 10291-10299.

CHROMOSOMAL LOCATION

Genetic locus: PVRL2 (human) mapping to 19q13.32.

SOURCE

Nectin 2 (B-C12) is a mouse monoclonal antibody raised against KG-1 cell line.

PRODUCT

Each vial contains 100 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and 1% stabilizer protein.

APPLICATIONS

Nectin 2 (B-C12) is recommended for detection of Nectin 2 of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

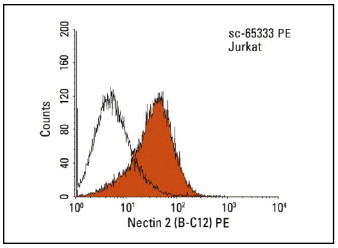
Suitable for use as control antibody for Nectin 2 siRNA (h): sc-43169, Nectin 2 shRNA Plasmid (h): sc-43169-SH and Nectin 2 shRNA (h) Lentiviral Particles: sc-43169-V.

Molecular Weight of Nectin 2α: 60 kDa.

Molecular Weight of Nectin 2δ: 65 kDa.

Positive Controls: ECV304 cell lysate: sc-2269.

DATA



Nectin 2 (B-C12): sc-65333. Indirect FCM analysis of Jurkat cells stained with Nectin 2 (B-C12), followed by PE-conjugated goat anti-mouse IgG: sc-3738. Black line histogram represents the isotype control, normal mouse IgG_{2b}: sc-3879.

SELECT PRODUCT CITATIONS

1. Prod'homme, V., et al. 2010. Human cytomegalovirus UL141 promotes efficient downregulation of the natural killer cell activating ligand CD112. J. Gen. Virol. 91: 2034-2039.
2. Liu, J., et al. 2012. Crystal structure of cell adhesion molecule Nectin-2/CD112 and its binding to immune receptor DNAM-1/CD226. J. Immunol. 188: 5511-5520.
3. Indra, I., et al. 2013. The adherens junction: a mosaic of cadherin and Nectin clusters bundled by actin filaments. J. Invest. Dermatol. 133: 2546-2554.
4. García-Cuesta, E.M., et al. 2015. NKG2D is a key receptor for recognition of bladder cancer cells by IL-2-activated NK cells and BCG promotes NK cell activation. Front. Immunol. 6: 284.

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.