SANTA CRUZ BIOTECHNOLOGY, INC.

CD57 (HNK-1): sc-81633

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BBACKGROUND

Over 100 cell surface markers have been identified through the use of monoclonal antibodies. Many of these markers have proven useful in identifying a specific subpopulation of cells within a mixed colony. Accordingly, these molecules have been assigned a "cluster of differentiation" (CD) designation. T lymphocytes displaying the natural killer (NK) cell marker CD57 (also designated Leu7) on their cell surface are distinguishable from other T cell subsets by their granular lymphocyte morphology and their clonal expansion in patients with AIDS and in recipients of bone marrow transplantation. $CD57^+$ cells have also been shown to localize to sites of certain tumors and large numbers of these cells are detected in the synovial fluid from patients suffering from rheumatoid arthritis.

REFERENCES

1. Holter, W., et al. 1991. Phenotypical and functional characterization of leukocytes—the CD-system. Wien. Klin. Wochenschr. 103: 247-262.
2. Dupuy d'Angeac, A., et al. 1993. Increased percentage of $CD3^+$, $CD57^+$ lymphocytes in patients with rheumatoid arthritis. Arthritis Rheum. 36: 608-612.

CHROMOSOMAL LOCATION

Genetic locus: B3GAT1 (human) mapping to 11q25; B3gat1 (mouse) mapping to 9 A4.

SOURCE

CD57 (HNK-1) is a mouse monoclonal antibody raised against peripheral blood mononuclear cells of human origin.

PRODUCT

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

CD57 (HNK-1) is available conjugated to either phycoerythrin (sc-81633 PE) or fluorescein (sc-81633 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

CD57 (HNK-1) is recommended for detection of CD57 of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (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 CD57 siRNA (h): sc-42798, CD57 siRNA (m): sc-60690, CD57 shRNA Plasmid (h): sc-42798-SH, CD57 shRNA Plasmid (m): sc-60690-SH, CD57 shRNA (h) Lentiviral Particles: sc-42798-V and CD57 shRNA (m) Lentiviral Particles: sc-60690-V.

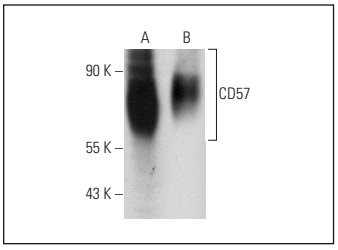
Molecular Weight of CD57: 110 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, K-562 whole cell lysate: sc-2203 or SK-N-SH cell lysate: sc-2410.

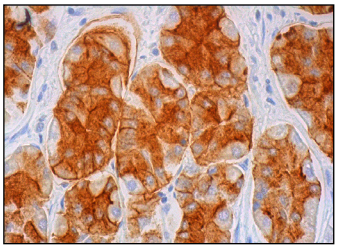
STORAGE

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

DATA



CD57 (HNK-1): sc-81633. Western blot analysis of CD57 expression in K-562 (**A**) and SK-N-SH (**B**) whole cell lysates.



CD57 (HNK-1): sc-81633. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic and membrane staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Li, Z.Y., et al. 2007. Odontogenic potential of bone marrow mesenchymal stem cells. J. Oral Maxillofac. Surg. 65: 494-500.
2. Terada, T. 2012. Malignant tumors of the small intestine: a histopathologic study of 41 cases among 1,312 consecutive specimens of small intestine. Int. J. Clin. Exp. Pathol. 5: 203-209.
3. Terada, T. 2012. Pathologic observations of the duodenum in 615 consecutive duodenal specimens in a single Japanese hospital: II. malignant lesions. Int. J. Clin. Exp. Pathol. 5: 52-57.
4. Terada, T. 2016. Histopathological study using computer database of 10,000 consecutive gastric specimens: (2) malignant lesions. Gastroenterol. Rep. 4: 54-58.
5. Liu, W., et al. 2020. Up-regulation of RNA binding proteins contributes to folate deficiency-induced neural crest cells dysfunction. Int. J. Biol. Sci. 16: 85-98.
6. Thomas, R., et al. 2022. Glycan epitope and integrin expression dynamics characterize neural crest epithelial-to-mesenchymal transition (EMT) in human pluripotent stem cell differentiation. Stem Cell Rev. Rep. 18: 2952-2965.
7. Elsayed, R., et al. 2023. Microbially-induced exosomes from dendritic cells promote paracrine immune senescence: novel mechanism of bone degenerative disease in mice. Aging Dis. 14: 136-151.

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.