SANTA CRUZ BIOTECHNOLOGY, INC.

CD13 (SJ1D1): sc-18899

BACKGROUND

CD13, or aminopeptidase N, is a type II transmembrane glycoprotein that is expressed on most cells of myeloid origin, including monocytes, basophils, eosinophils, neutrophils and myeloid leukemias. CD13 is also found on certain epithelial cells, fibroblasts and osteoclasts. CD13 acts as a zinc-binding metalloprotease that plays a role in digestion and may function in the inactivation of some regulatory peptides such as enkephalins. CD13 may play a role in the invasion of cancer cells by enhancing their invasive capacity and metastatic behavior. The activity of CD13 can be inactivated using specific inhibitors that evoke apoptosis of CD13-positive cancer cells. Basic fibroblast growth factor (bFGF) expression upregulates CD13 expression in human melanoma cells by activating both the myeloid and the epithelial CD13 promoter.

REFERENCES

1. Bradstock, K.F., et al. 1985. Human Myeloid differentiation antigens identified by monoclonal antibodies: expression on leukemic cells. Pathology 17: 392-399.
2. Bradstock, K.F., et al. 1985. Myeloid progenitor surface antigen identified by monoclonal antibody. Br. J. Haematol. 61: 11-20.
3. Favaloro, E.J., et al. 1988. Further characterization of human myeloid antigens (gp160,95; gp150; gp67): investigation of epitopic heterogeneity and non-haemopoietic distribution using panels of monoclonal antibodies belonging to CD-11b, CD-13 and CD-33. Br. J. Haematol. 69: 163-171.
4. Favaloro, E.J. 1991. CD-13 ('gp150'; aminopeptidase-N): co-expression on endothelial and haemopoietic cells with conservation of functional activity. Immunol. Cell Biol. 69: 253-260.
5. Favaloro, E.J., et al. 1993. The hepatobiliary disease marker serum alanine aminopeptidase predominantly comprises an isoform of the haematological Myeloid differentiation antigen and leukaemia marker CD-13/gp150. Clin. Chim. Acta 220: 81-90.
6. Favaloro, E.J., et al. 1993. CD13 (GP150; aminopeptidase-N): predominant functional activity in blood is localized to plasma and is not cell-surface associated. Exp. Hematol. 21: 1695-1701.

CHROMOSOMAL LOCATION

Genetic locus: ANPEP (human) mapping to 15q26.1.

SOURCE

CD13 (SJ1D1) is a mouse monoclonal antibody raised against KG1 cells of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD13 (SJ1D1) is available conjugated to either phycoerythrin (sc-18899 PE) or fluorescein (sc-18899 FITC), 200 µg/ml, for IF, IHC(P) and FCM.

APPLICATIONS

CD13 (SJ1D1) is recommended for detection of CD13 of human origin by 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 flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for CD13 siRNA (h): sc-29960, CD13 shRNA Plasmid (h): sc-29960-SH and CD13 shRNA (h) Lentiviral Particles: sc-29960-V.

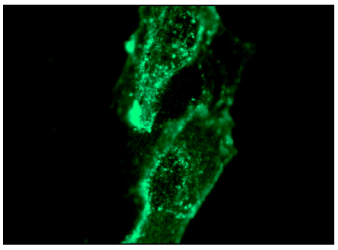
Molecular Weight of human CD13: 150 kDa.

Molecular Weight of rat CD13: 120 kDa.

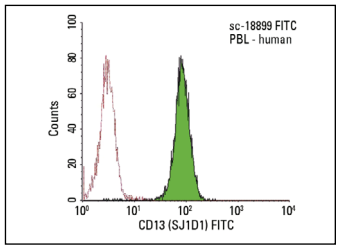
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CD13 (SJ1D1): sc-18899. Immunofluorescence staining of methanol-fixed ccd1064sk cells showing membrane localization.



CD13 (SJ1D1) FITC: sc-18899 FITC. FCM analysis of human peripheral blood leukocytes. Black line histogram represents the isotype control, normal mouse IgG_1-FITC: sc-2855.

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.