SANTA CRUZ BIOTECHNO

CD13 (BR2): sc-53970

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. McMichael, A.J., et al. 1987. Leucocyte typing III. white cell differentiation antigens. New York: Oxford University Press.
4. 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 CD11b, CD13 and CD33. Br. J. Haematol. 69: 163-171.
5. Knapp, W., et al. (eds.). 1989. Leucocyte Typing IV. Oxford: Oxford University Press.

CHROMOSOMAL LOCATION

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

SOURCE

CD13 (BR2) is a mouse monoclonal antibody raised against foreskin fibroblasts 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 (BR2) is available conjugated to either phycoerythrin (sc-53970 PE) or fluorescein (sc-53970 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

CD13 (BR2) is recommended for detection of CD13 of 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) 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.

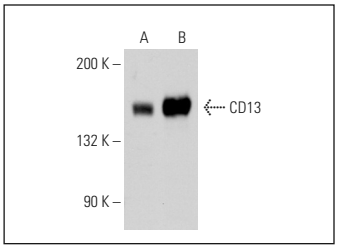
Molecular Weight of CD13: 150 kDa.

Positive Controls: CCD-1064Sk cell lysate: sc-2263.

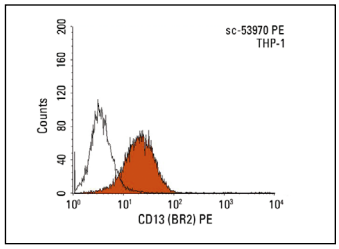
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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



Western blot analysis of CD13 expression in GBB whole cell lysate (**A**) and GBB whole cell lysate immunoprecipitated with CD13 (BR2): sc-53970 (**B**) and detected with CD13 (3D8): sc-13536. Immunoprecipitation reagent used: Protein G PLUS-Agarose: sc-2002.



CD13 (BR2) PE: sc-53970 PE. FCM analysis of THP-1 cells. Black line histogram represents the isotype control, normal mouse IgG_1-PE: sc-2866.

SELECT PRODUCT CITATIONS

1. Aristorena, M., et al. 2014. Expression of endoglin isoforms in the myeloid lineage and their role during aging and macrophage polarization. J. Cell Sci. 127: 2723-2735.
2. Hamon, Y., et al. 2015. Analysis of urinary cathepsin C for diagnosing Papillon-Lefèvre syndrome. FEBS J. 283: 498-509.

RESEARCH USE

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