

CD13 (M-17): sc-6996

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*. Oxford: 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 CD-11 β . *Br. J. Haematol.* 69: 163-171.
5. Knapp, W., et al. 1989. *Leucocyte Typing IV*. Oxford: Oxford University Press.
6. 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.

CHROMOSOMAL LOCATION

Genetic locus: Anpep (mouse) mapping to 7 D3.

SOURCE

CD13 (M-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CD13 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6996 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

CD13 (M-17) is recommended for detection of CD13 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CD13 siRNA (m): sc-37242, CD13 shRNA Plasmid (m): sc-37242-SH and CD13 shRNA (m) Lentiviral Particles: sc-37242-V.

Molecular Weight of CD13: 150 kDa.

Positive Controls: rat kidney extract: sc-2394.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Sroga, J.M., et al. 2003. Rats and mice exhibit distinct inflammatory reactions after spinal cord injury. *J. Comp. Neurol.* 462: 223-240.
2. Winnicka, B., et al. 2010. CD13 is dispensable for normal hematopoiesis and myeloid cell functions in the mouse. *J. Leukoc. Biol.* 88: 347-359.
3. Kolb, A.F., et al. 2013. Mammary gland development is delayed in mice deficient for aminopeptidase N. *Transgenic Res.* 22: 425-434.

PROTOCOLS

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

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Try **CD13 (12): sc-136484**, our highly recommended monoclonal alternative to CD13 (M-17).