

CD13 (12): sc-136484



The Power to Question

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., Eds. 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 CD11 β . *Br. J. Haematol.* 69: 163-171.
5. Knapp, W., et al. 1989. *Leucocyte Typing IV: White Cell Differentiation Antigens*. New York: 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 (human) mapping to 15q26.1; Anpep (mouse) mapping to 7 D3.

SOURCE

CD13 (12) is a mouse monoclonal antibody raised against amino acids 22-139 of CD13 of rat origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD13 (12) is available conjugated to agarose (sc-136484 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-136484 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-136484 PE), fluorescein (sc-136484 FITC), Alexa Fluor[®] 488 (sc-136484 AF488), Alexa Fluor[®] 594 (sc-136484 AF594) or Alexa Fluor[®] 647 (sc-136484 AF647), 200 μ g/ml, for IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-136484 AF680) or Alexa Fluor[®] 790 (sc-136484 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD13 (12) is recommended for detection of CD13 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for CD13 siRNA (h): sc-29960, CD13 siRNA (m): sc-37242, CD13 shRNA Plasmid (h): sc-29960-SH, CD13 shRNA Plasmid (m): sc-37242-SH, CD13 shRNA (h) Lentiviral Particles: sc-29960-V and CD13 shRNA (m) Lentiviral Particles: sc-37242-V.

Molecular Weight of human CD13: 150 kDa.

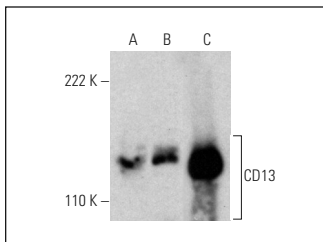
Molecular Weight of rat CD13: 120 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, RAW 264.7 whole cell lysate: sc-2211 or rat kidney extract: sc-2394.

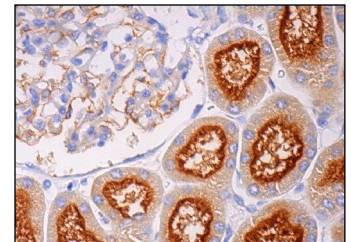
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CD13 (12): sc-136484. Western blot analysis of CD13 expression in Jurkat (A) and RAW 264.7 (B) whole cell lysates and rat kidney tissue extract (C).



CD13 (12): sc-136484. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing membrane staining of cells in glomeruli and apical membrane and cytoplasmic staining of cells in tubules.

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.

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