

CD13 (A-5): sc-166270

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, eds. 1987. *Leucocyte Typing III*. Oxford: Oxford University Press.

CHROMOSOMAL LOCATION

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

SOURCE

CD13 (A-5) is a mouse monoclonal antibody raised against amino acids 668-967 of CD13 of human origin.

PRODUCT

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

APPLICATIONS

CD13 (A-5) is recommended for detection of CD13 of human origin by Western Blotting (starting dilution 1:100, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

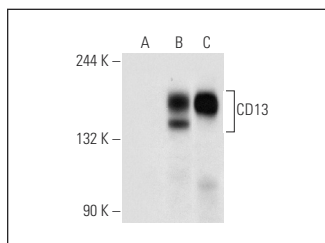
Molecular Weight of rat CD13: 120 kDa.

Positive Controls: CD13 (h): 293T Lysate: sc-116664 or CCD-1064Sk cell lysate: sc-2263.

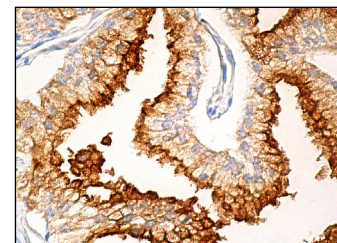
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CD13 (A-5): sc-166270. Western blot analysis of CD13 expression in non-transfected 293T: sc-117752 (A), human CD13 transfected 293T: sc-116664 (B) and CCD-1064Sk (C) whole cell lysates.



CD13 (A-5): sc-166270. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing membrane and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Malinauskas, M., et al. 2014. Angiotensin IV induced contractions in human jejunal wall musculature *in vitro*. *Peptides* 59: 63-69.
2. Björkman, E., et al. 2015. Angiotensin IV and the human esophageal mucosa: an exploratory study in healthy subjects and gastroesophageal reflux disease patients. *J. Renin Angiotensin Aldosterone Syst.* 16: 570-577.
3. Radhakrishnan, S., et al. 2019. *In vitro* transdifferentiation of human adipose tissue-derived stem cells to neural lineage cells—a stage-specific incidence. *Adipocyte* 8: 164-177.

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.