SANTA CRUZ BIOTECHNOLOGY, INC.

CD13 (WM15): sc-51522



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

- Bradstock, K.F., et al. 1985. Human myeloid differentiation antigens identified by monoclonal antibodies: expression on leukemic cells. Pathology 17: 392-399.
- Bradstock, K.F., et al. 1985. Myeloid progenitor surface antigen identified by monoclonal antibody. Br. J. Haematol. 61: 11-20.
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CHROMOSOMAL LOCATION

Genetic locus: ANPEP (human) mapping to 15q26.1; Anpep (mouse) mapping to 7 D3.

SOURCE

CD13 (WM15) is a mouse monoclonal antibody raised against AML cells of human origin.

PRODUCT

Each vial contains 100 $\mu g~lg G_1$ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD13 (WM15) is available conjugated fluorescein (sc-51522 FITC, 100 tests in 2 ml), for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

CD13 (WM15) is recommended for detection of CD13 of mouse, rat and human origin by 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 flow cytometry (1 μ g per 1 x 10⁶ cells).

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

STORAGE

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

DATA



CD13 (WM15): sc-51522. Indirect FCM analysis of human peripheral blood leukocytes stained with CD13 (WM15), followed by PE-conjugated goat anti-mouse lgG_1 : sc-3764. Black line histogram represents the isotype control, normal mouse lgG_1 : sc-3877.

SELECT PRODUCT CITATIONS

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- Castillo, L.M., et al. 2017. Expression of typical osteoclast markers by PBMCs after PEG-induced fusion as a model for studying osteoclast differentiation. J. Mol. Histol. 48: 169-185.
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- Ji, S., et al. 2021. Suppression of CD13 enhances the cytotoxic effect of chemotherapeutic drugs in hepatocellular carcinoma cells. Front. Pharmacol. 12: 660377.
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- Sukowati, C., et al. 2023. PD-L1 downregulation and DNA methylation inhibition for molecular therapy against cancer stem cells in hepatocellular carcinoma. Int. J. Mol. Sci. 24: 13357.

RESEARCH USE

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