SANTA CRUZ BIOTECHNOLOGY, INC.

CD26 (5E8): sc-52642

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CD26 (dipeptidylpeptidase 4, adenosine deaminase complexing protein 2, ADABP, ADCP2, DPPIV, TP103) is a membrane glycoprotein and a serine exopeptidase that cleaves X-proline dipeptides from the N-terminus of polypeptides. CD26 has an essential role in immune regulation as a T cell activation molecule and a regulator of chemokine function. CD26 associates with CXCR4 and gp120 and may influence the pathophysiology of HIV infection. Adenosine deaminase (ADA) co-localizing with adenosine receptors on dendritic cells are able to interact with CD26 expressed on lymphocytes. This costimulatory signal in the immunological synapse leads to an increase in the production of the T helper 1 and proinflammatory cytokines IFN-γ, TNFα and IL-6. CD26 plays a role in the pathogenesis and behavior of human cancers, including solid tumors and hematological malignancies. CD26-caveolin-1 interaction plays a role in the upregulation of CD86 on TT-loaded monocytes and subsequent engagement with CD28 on T cells, leading to antigen-specific T cell activation.

CHROMOSOMAL LOCATION

Genetic locus: Dpp4 (mouse) mapping to 2 C1.3.

SOURCE

CD26 (5E8) is a mouse monoclonal antibody raised against liver plasma membrane extracts of rat 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.

CD26 (5E8) is available conjugated to agarose (sc-52642 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-52642 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-52642 PE), fluorescein (sc-52642 FITC), Alexa Fluor® 488 (sc-52642 AF488), Alexa Fluor® 546 (sc-52642 AF546), Alexa Fluor® 594 (sc-52642 AF594) or Alexa Fluor® 647 (sc-52642 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-52642 AF680) or Alexa Fluor® 790 (sc-52642 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD26 (5E8) is recommended for detection of CD26 of mouse and rat 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for CD26 siRNA (m): sc-42763, CD26 shRNA Plasmid (m): sc-42763-SH and CD26 shRNA (m) Lentiviral Particles: sc-42763-V.

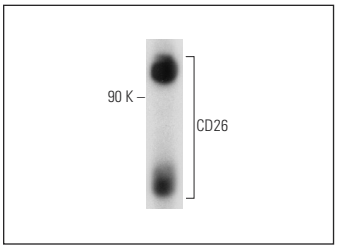
Molecular Weight of CD26: 110 kDa.

Positive Controls: rat kidney extract: sc-2394.

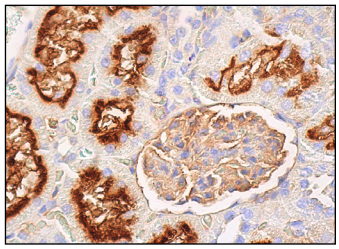
STORAGE

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

DATA



CD26 (5E8): sc-52642. Western blot analysis of CD26 expression in rat kidney tissue extract.



CD26 (5E8): sc-52642. Immunoperoxidase staining of formalin fixed, paraffin-embedded rat kidney tissue showing apical membrane staining of cells in tubules.

SELECT PRODUCT CITATIONS

1. Crajoinas, R.O., et al. 2010. Posttranslational mechanisms associated with reduced NHE3 activity in adult vs. young prehypertensive SHR. Am. J. Physiol. Renal Physiol. 299: F872-F881.
2. Tarantola, E., et al. 2012. Dipeptidylpeptidase-IV, a key enzyme for the degradation of incretins and neuropeptides: activity and expression in the liver of lean and obese rats. Eur. J. Histochem. 56: e41.
3. Wang, Z., et al. 2014. Soluble DPP4 originates in part from bone marrow cells and not from the kidney. Peptides 57: 109-117.
4. Tarantola, E., et al. 2015. Differences in expression of DPP4 in steatotic rat liver are not related to differences in the methylation of its gene promoter. In Vivo 29: 547-553.
5. Yovchev, M.I., et al. 2017. Fetal liver stem/progenitor cell transplantation: a model to study tissue mass replacement and cell-based therapies. Methods Mol. Biol. 1506: 101-115.
6. Avalos-de León, C.G., et al. 2019. The role of GLP1 in rat steatotic and non-steatotic liver transplantation from cardiocirculatory death donors. Cells 8: 1599.
7. Nishida, S., et al. 2020. Inhibition of inflammation-mediated DPP-4 expression by linagliptin increases M2 macrophages in atherosclerotic lesions. Biochem. Biophys. Res. Commun. 524: 8-15.
8. Benetti, A., et al. 2021. Urinary DPP4 correlates with renal dysfunction, and DPP4 inhibition protects against the reduction in megalin and podocin expression in experimental CKD. Am. J. Physiol. Renal Physiol. 320: F285-F296.
9. Oh, J.H., et al. 2022. Discovery of dipeptidyl peptidase-4 inhibitor specific biomarker in NAFLD mouse models using modified basket trial. Clin. Mol. Hepatol. E-published.

RESEARCH USE

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