SANTA CRUZ BIOTECHNOLOGY, INC.

RECK (G-4): sc-373929

BACKGROUND

RECK (reversion-inducing-cysteine-rich protein with Kazal motifs) is a membrane anchored glycoprotein that binds to and inhibits the proteolytic activity of matrix metalloproteinase-9 (MMP-9). The enzymatic activity of MMP-9 facilitates tumor invasion by proteolytically digesting the extracellular matrix, thereby enabling tumor growth, expansion and metastasis. RECK inhibits the secretion and activation of MMP-9 into the extracellular matrix, which results in the inhibition of tumor growth. RECK contains multiple EGF-like repeats and serine-protease inhibitor-like domains. The expression of RECK is suppressed in several tumors and oncogenically transformed cells, suggesting that the loss of RECK activity correlates with transformed phenotypes. Transcriptional activation of RECK is potentially negatively regulated by the Sp1 family of transcription factors, as it contains two Sp1 binding motifs in the promoter region, and in cells transformed with the Ras oncogene, the Sp1 promoter region is essential for repressing RECK gene expression.

REFERENCES

1. DeClerck, Y.A., et al. 1992. Inhibition of invasion and metastasis in cells transfected with an inhibitor of metalloproteinases. Cancer Res. 52: 701-708.
2. Himelstein, B.P., et al. 1997. Transcriptional activation of the matrix metalloproteinase-9 gene in an H-Ras and v-Myc transformed rat embryo cell line. Oncogene 14: 1995-1998.
3. Giambernardi, T.A., et al. 1998. Overview of matrix metalloproteinase expression in cultured human cells. Matrix Biol. 16: 483-496.

CHROMOSOMAL LOCATION

Genetic locus: RECK (human) mapping to 9p13.3; Reck (mouse) mapping to 4 B1.

SOURCE

RECK (G-4) is a mouse monoclonal antibody raised against amino acids 644-943 mapping near the C-terminus of RECK of human origin.

PRODUCT

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

RECK (G-4) is available conjugated to agarose (sc-373929 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373929 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373929 PE), fluorescein (sc-373929 FITC), Alexa Fluor® 488 (sc-373929 AF488), Alexa Fluor® 546 (sc-373929 AF546), Alexa Fluor® 594 (sc-373929 AF594) or Alexa Fluor® 647 (sc-373929 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373929 AF680) or Alexa Fluor® 790 (sc-373929 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

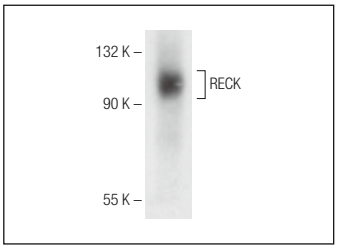
RECK (G-4) is recommended for detection of RECK of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for RECK siRNA (h): sc-39718, RECK siRNA (m): sc-39719, RECK siRNA (r): sc-270171, RECK shRNA Plasmid (h): sc-39718-SH, RECK shRNA Plasmid (m): sc-39719-SH, RECK shRNA Plasmid (r): sc-270171-SH, RECK shRNA (h) Lentiviral Particles: sc-39718-V, RECK shRNA (m) Lentiviral Particles: sc-39719-V and RECK shRNA (r) Lentiviral Particles: sc-270171-V.

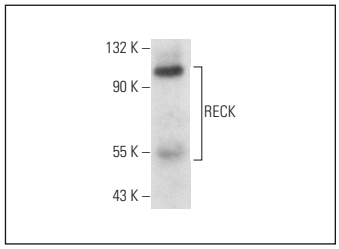
Molecular Weight of RECK: 110 kDa.

Positive Controls: WI-38 whole cell lysate: sc-364260 or PC-12 cell lysate: sc-2250.

DATA



RECK (G-4): sc-373929. Western blot analysis of RECK expression in WI-38 whole cell lysate.



RECK (G-4): sc-373929. Western blot analysis of RECK expression in PC-12 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Nambiar, J., et al. 2016. Anacardic acid inhibits gelatinases through the regulation of Spry2, MMP-14, EMMPRIN and RECK. Exp. Cell Res. 349: 139-151.
2. Willson, J.A. and Damjanovski, S. 2019. Spatial analysis of RECK, MT1-MMP, and TIMP-2 proteins during early *Xenopus laevis* development. Gene Expr. Patterns 34: 119066.
3. Guo, Y., et al. 2021. Reck-Notch1 signaling mediates miR-221/222 regulation of lung cancer stem cells in NSCLC. Front. Cell Dev. Biol. 9: 663279.
4. Bayat, H., et al. 2023. Synthetic miR-21 decoy circularized by tRNA splicing mechanism inhibited tumorigenesis in glioblastoma *in vitro* and *in vivo* models. Mol. Ther. Nucleic Acids 32: 432-444.
5. Aguilar-Martínez, S.Y., et al. 2024. MiR-21 regulates growth and migration of cervical cancer cells by RECK signaling pathway. Int. J. Mol. Sci. 25: 4086.

RESEARCH USE

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