SANTA CRUZ BIOTECHNOLOGY, INC.

RECK (S-18): sc-9689

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.

CHROMOSOMAL LOCATION

Genetic locus: Reck (mouse) mapping to 4 B1.

SOURCE

RECK (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of RECK of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9689 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RECK (S-18) is recommended for detection of precursor and mature RECK of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

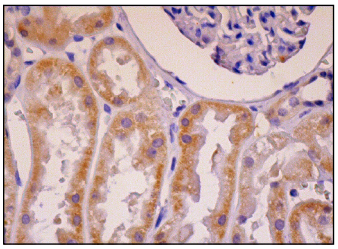
Suitable for use as control antibody for RECK siRNA (m): sc-39719, RECK siRNA (r): sc-270171, RECK shRNA Plasmid (m): sc-39719-SH, RECK shRNA Plasmid (r): sc-270171-SH, RECK shRNA (m) Lentiviral Particles: sc-39719-V and RECK shRNA (r) Lentiviral Particles: sc-270171-V.

Molecular Weight of RECK: 110 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



RECK (S-18): sc-9689. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules.

SELECT PRODUCT CITATIONS

1. Fukushima, K., et al. 2007. Activation and localization of matrix metalloproteinase-2 and -9 in the skeletal muscle of the muscular dystrophy dog ($CXMD_J$). BMC Musculoskelet. Disord. 8: 54.
2. Accorsi-Mendonca, T., et al. 2008. Expression of matrix metalloproteinases-2 and -9 and RECK during alveolar bone regeneration in rat. J. Mol. Histol. 39: 201-208.
3. Zambuzzi, W.F., et al. 2009. Ascorbate-induced osteoblast differentiation recruits distinct MMP-inhibitors: RECK and TIMP-2. Mol. Cell. Biochem. 322: 143-150.
4. Paiva, K.B., et al. 2009. Rat forming incisor requires a rigorous ECM remodeling modulated by MMP/RECK balance. J. Mol. Histol. 40: 201-207.
5. de Oliveira Demarchi, A.C., et al. 2010. Development of secondary palate requires strict regulation of ECM remodeling: sequential distribution of RECK, MMP-2, MMP-3, and MMP-9. Cell Tissue Res. 340: 61-69.

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 or our catalog for detailed protocols