SANTA CRUZ BIOTECHNOLOGY, INC.

MMP-2 (2C1): sc-13594

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The matrix metalloproteinases (MMP) are a family of peptidase enzymes responsible for the degradation of extracellular matrix components, including collagen, gelatin, Fibronectin, Laminin and proteoglycan. Transcription of MMP genes is differentially activated by phorbol ester, lipopolysaccharide (LPS) or staphylococcal enterotoxin B (SEB). MMP catalysis requires both calcium and zinc. MMP-2 (also designated type IV collagenase) cleaves collagen types IV, V, VII and X and gelatin type I. Activation of MMP-2 secretion requires the Ras signaling pathway.

CHROMOSOMAL LOCATION

Genetic locus: MMP2 (human) mapping to 16q12.2; Mmp2 (mouse) mapping to 8 C5.

SOURCE

MMP-2 (2C1) is a mouse monoclonal antibody raised against the activated form of MMP-2 of human 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.

MMP-2 (2C1) is available conjugated to agarose (sc-13594 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to either phycoerythrin (sc-13594 PE), fluorescein (sc-13594 FITC), Alexa Fluor® 488 (sc-13594 AF488), Alexa Fluor® 546 (sc-13594 AF546), Alexa Fluor® 594 (sc-13594 AF594) or Alexa Fluor® 647 (sc-13594 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13594 AF680) or Alexa Fluor® 790 (sc-13594 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

MMP-2 (2C1) is recommended for detection of MMP-2 of mouse, rat and human 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for MMP-2 siRNA (h): sc-29398, MMP-2 siRNA (m): sc-37264, MMP-2 siRNA (r): sc-108049, MMP-2 shRNA Plasmid (h): sc-29398-SH, MMP-2 shRNA Plasmid (m): sc-37264-SH, MMP-2 shRNA Plasmid (r): sc-108049-SH, MMP-2 shRNA (h) Lentiviral Particles: sc-29398-V, MMP-2 shRNA (m) Lentiviral Particles: sc-37264-V and MMP-2 shRNA (r) Lentiviral Particles: sc-108049-V.

Molecular Weight of pro-MMP-2: 72 kDa.

Molecular Weight of cleaved MMP-2: 63 kDa.

Positive Controls: ECV304 cell lysate: sc-2269, MMP-2 (h): 293 Lysate: sc-176407 or A-375 cell lysate: sc-3811.

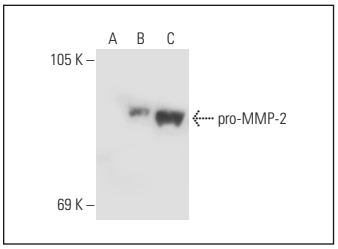
RESEARCH USE

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

STORAGE

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

DATA



MMP-2 (2C1): sc-13594. Western blot analysis of MMP-2 expression in non-transfected 293: sc-110760 (**A**), human MMP-2 transfected 293: sc-176407 (**B**) and A-375 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Fuchshofer, R., et al. 2003. The effect of TGF-β2 on human trabecular meshwork extracellular proteolytic system. Exp. Eye Res. 77: 757-765.
2. Wang, K.T., et al. 2010. Gastroprotective activity of atractylenolide III from *Atractylodes* ovata on ethanol-induced gastric ulcer *in vitro* and *in vivo*. J. Pharm. Pharmacol. 62: 381-388.
3. Sreekanth, C.N., et al. 2011. Molecular evidences for the chemosensitizing efficacy of liposomal curcumin in paclitaxel chemotherapy in mouse models of cervical cancer. Oncogene 30: 3139-3152.
4. Li, Y., et al. 2012. Hepatitis C virus activates Bcl-2 and MMP-2 expression through multiple cellular signaling pathways. J. Virol. 86: 12531-12543.
5. Cai, Z., et al. 2013. CYP2J2 overexpression increases EETs and protects against angiotensin II-induced abdominal aortic aneurysm in mice. J. Lipid Res. 54: 1448-1456.
6. Zhao, K., et al. 2014. Wogonin suppresses melanoma cell B16-F10 invasion and migration by inhibiting Ras-medicated pathways. PLoS ONE 9: e106458.
7. Han, Y.S., et al. 2015. Fucoidan inhibits the migration and proliferation of HT-29 human colon cancer cells via the phosphoinositide-3 kinase/Akt/mechanistic target of rapamycin pathways. Mol. Med. Rep. 12: 3446-3452.
8. Liu, H., et al. 2016. NS-398 promotes pancreatic cancer cell invasion by CD147 and MMP-2 via the activation of P38. Mol. Med. Rep. 13: 2208-2214.
9. Jin, H., et al. 2017. p63α protein up-regulates heat shock protein 70 expression via E2F1 transcription factor 1, promoting Wasf3/Wave3/MMP9 signaling and bladder cancer invasion. J. Biol. Chem. 292: 15952-15963.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.