SANTA CRUZ BIOTECHNOLOGY, INC.

MMP-2 (8B4): sc-13595

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 (8B4) is a mouse monoclonal antibody raised against activated recominant 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 (8B4) is available conjugated to agarose (sc-13595 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-13595 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13595 PE), fluorescein (sc-13595 FITC), Alexa Fluor® 488 (sc-13595 AF488), Alexa Fluor® 546 (sc-13595 AF546), Alexa Fluor® 594 (sc-13595 AF594) or Alexa Fluor® 647 (sc-13595 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13595 AF680) or Alexa Fluor® 790 (sc-13595 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

MMP-2 (8B4) 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)], 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 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.

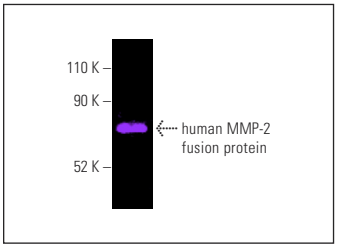
Molecular Weight of cleaved MMP-2: 63 kDa.

Positive Controls: ECV304 cell lysate: sc-2269 or A-375 cell lysate: sc-3811.

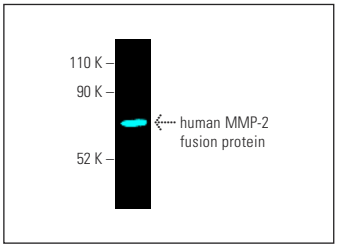
STORAGE

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

DATA



MMP-2 (8B4): sc-13595. Fluoroscent western blot analysis of human recombinant MMP-2 fusion protein. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_1 BP-CFL 555: sc-533662.



MMP-2 (8B4): sc-13595. Fluoroscent western blot analysis of human recombinant MMP-2 fusion protein. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_1 BP-CFL 647: sc-533664.

SELECT PRODUCT CITATIONS

1. Wang, X.M., et al. 2005. Fibroblast activation protein increases apoptosis, cell adhesion, and migration by the LX-2 human stellate cell line. Hepatology 42: 935-945.
2. Zeng, W., et al. 2016. Silencing of hERG1 gene inhibits proliferation and invasion, and induces apoptosis in human osteosarcoma cells by targeting the NFκB pathway. J. Cancer 7: 746-757.
3. Prata, L.O., et al. 2017. Original research: ACE2 activator associated with physical exercise potentiates the reduction of pulmonary fibrosis. Exp. Biol. Med. 242: 8-21.
4. Yun, J., et al. 2018. IL-32 γ reduces lung tumor development through upregulation of TIMP-3 overexpression and hypomethylation. Cell Death Dis. 9: 306.
5. Pei, Y., et al. 2019. Ursolic acid suppresses the biological function of osteosarcoma cells. Oncol. Lett. 18: 2628-2638.
6. Bansod, S., et al. 2020. Nimbolide abrogates cerulein-induced chronic pancreatitis by modulating β-catenin/Smad in a sirtuin-dependent way. Pharmacol. Res. 156: 104756.
7. Berköz, M., et al. 2021. Artesunate inhibits melanoma progression *in vitro* via suppressing STAT3 signaling pathway. Pharmacol. Rep. 73: 650-663.
8. Wang, R., et al. 2022. PLEKHH2 binds β-arrestin1 through its FERM domain, activates FAK/PI3K/Akt phosphorylation, and promotes the malignant phenotype of non-small cell lung cancer. Cell Death Dis. 13: 858.
9. Mannino, D., et al. 2023. Neuroprotective effects of GSK-343 in an *in vivo* model of MPTP-induced nigrostriatal degeneration. J. Neuroinflammation 20: 155.

RESEARCH USE

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