

MetAP-2 (F-7): sc-365637

BACKGROUND

Methionine aminopeptidases (MetAP), also designated peptidase M proteins, are members of the M24 family of proteins. Both MetAP-1 and MetAP-2 release N-terminal amino acids, usually methionine, from nascent peptides and arylamines. Eukaryotes contain both MetAP-1 and MetAP-2, whereas prokaryotes possess only the MetAP-1 enzyme. MetAP-1 and MetAP-2 control cell proliferation in mammalian cells. MetAP-2 is highly conserved between human and *Saccharomyces cerevisiae*. Neurofibromin (NF1) regulates MetAP-2 and increased expression of MetAP-2 correlates with several forms of cancer. Inhibitors of MetAP-2 are potential targets in cancer therapeutics, particularly in NF1-associated tumor proliferation. Chemotherapeutic drugs such as ovalicin and fumagillin bind to the active site of and inhibit MetAP-2.

REFERENCES

1. Sin, N., et al. 1997. The aminopeptidase, MetAP-2. *Proc. Natl. Acad. Sci. USA* 94: 6099-6103.
2. Bernier, S.G., et al. 2005. Methionine aminopeptidases type I and type II are essential to control cell proliferation. *J. Cell. Biochem.* 95: 1191-1203.
3. Chun, E., et al. 2005. Novel inhibitors targeted to methionine aminopeptidase 2 (MetAP-2) strongly inhibit the growth of cancers in xenografted nude model. *Int. J. Cancer* 114: 124-130.
4. Kallander, L.S., et al. 2005. 4-aryl-1,2,3-triazole: a novel template for a reversible methionine aminopeptidase 2 inhibitor, optimized to inhibit angiogenesis *in vivo*. *J. Med. Chem.* 48: 5644-5647.

CHROMOSOMAL LOCATION

Genetic locus: METAP2 (human) mapping to 12q22; Metap2 (mouse) mapping to 10 C2.

SOURCE

MetAP-2 (F-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 152-183 within an internal region of MetAP-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MetAP-2 (F-7) is available conjugated to agarose (sc-365637 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365637 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365637 PE), fluorescein (sc-365637 FITC), Alexa Fluor® 488 (sc-365637 AF488), Alexa Fluor® 546 (sc-365637 AF546), Alexa Fluor® 594 (sc-365637 AF594) or Alexa Fluor® 647 (sc-365637 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365637 AF680) or Alexa Fluor® 790 (sc-365637 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365637 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

MetAP-2 (F-7) is recommended for detection of MetAP-2 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), 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).

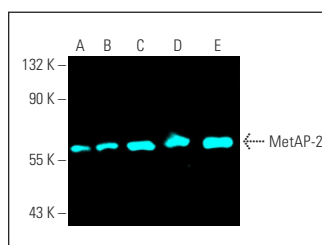
MetAP-2 (F-7) is also recommended for detection of MetAP-2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for MetAP-2 siRNA (h): sc-61024, MetAP-2 siRNA (m): sc-61025, MetAP-2 shRNA Plasmid (h): sc-61024-SH, MetAP-2 shRNA Plasmid (m): sc-61025-SH, MetAP-2 shRNA (h) Lentiviral Particles: sc-61024-V and MetAP-2 shRNA (m) Lentiviral Particles: sc-61025-V.

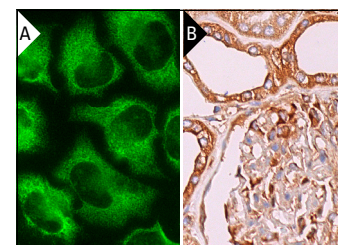
Molecular Weight of MetAP-2: 67 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

DATA



MetAP-2 (F-7) Alexa Fluor® 647: sc-365637 AF647. Direct fluorescent western blot analysis of MetAP-2 expression in HeLa (A), PC-12 (B), Jurkat (C), CCRF-CEM (D) and TK-1 (E) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.



MetAP-2 (F-7): sc-365637. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in glomeruli and cells in tubules (B).

SELECT PRODUCT CITATIONS

1. Martinez Molina, D., et al. 2013. Monitoring drug target engagement in cells and tissues using the cellular thermal shift assay. *Science* 341: 84-87.
2. Ji, C.H., et al. 2022. The AUTOTAC chemical biology platform for targeted protein degradation via the autophagy-lysosome system. *Nat. Commun.* 13: 904.

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.