

# 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 IgG<sub>1</sub> 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<sup>®</sup> 488 (sc-365637 AF488), Alexa Fluor<sup>®</sup> 546 (sc-365637 AF546), Alexa Fluor<sup>®</sup> 594 (sc-365637 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-365637 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-365637 AF680) or Alexa Fluor<sup>®</sup> 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).

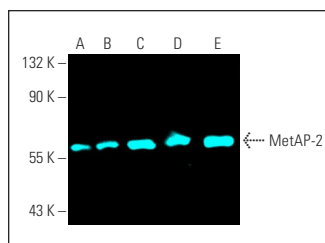
MetAP-2 (F-7) is also recommended for detection of MetAP-2 in additional species, including equine, canine, bovine, porcine and avian.

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.

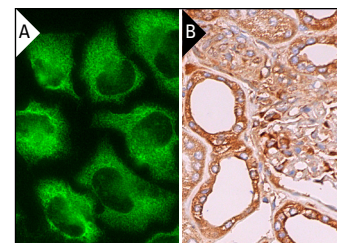
Molecular Weight of MetAP-2: 67 kDa.

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<sup>®</sup> 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<sup>®</sup> 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.