

# MPHOSPH8 (C-8): sc-398598

## BACKGROUND

MPHOSPH8 (M-phase phosphoprotein 8), also known as two hybrid-associated protein 3 with RanBPM (Twa), is a 860 amino acid nuclear protein that is phosphorylated in the M (mitotic) phase of the cell cycle. MPHOSPH8 contains four ANK repeats, motifs that are typically found in transcriptional regulators and cell cycle proteins and may be involved in protein-protein binding. Due to evidence suggesting that MPHOSPH8 forms a complex with Muskelin and Ran BP-M, a GTPase implicated in a diverse array of cellular processes, it may play a role in the Ran GTPase cycle. The gene encoding MPHOSPH8 resides on chromosome 13. There are two isoforms of MPHOSPH8 that are produced as a result of alternative splicing events.

## REFERENCES

1. Matsumoto-Taniura, N., et al. 1996. Identification of novel M phase phosphoproteins by expression cloning. *Mol. Biol. Cell* 7: 1455-1469.
2. Umeda, M., et al. 2003. A novel nuclear protein, Twa1, and Muskelin comprise a complex with RanBPM. *Gene* 303: 47-54.
3. Kobayashi, N., et al. 2007. RanBPM, Muskelin, p48EMLP, p44CTLH, and the armadillo-repeat proteins ARMC8 $\alpha$  and ARMC8 $\beta$  are components of the CTLH complex. *Gene* 396: 236-247.
4. Voronin, D.A. and Kiseleva, E.V. 2007. Functional role of proteins containing ankyrin repeats. *Tsitologiya* 49: 989-999.
5. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611626. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: MPHOSPH8 (human) mapping to 13q12.11; Mphosph8 (mouse) mapping to 14 C3.

## SOURCE

MPHOSPH8 (C-8) is a mouse monoclonal antibody raised against amino acids 465-660 mapping within an internal region of MPHOSPH8 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MPHOSPH8 (C-8) is available conjugated to agarose (sc-398598 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398598 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398598 PE), fluorescein (sc-398598 FITC), Alexa Fluor<sup>®</sup> 488 (sc-398598 AF488), Alexa Fluor<sup>®</sup> 546 (sc-398598 AF546), Alexa Fluor<sup>®</sup> 594 (sc-398598 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-398598 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-398598 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-398598 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## RESEARCH USE

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

## APPLICATIONS

MPHOSPH8 (C-8) is recommended for detection of MPHOSPH8 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (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 MPHOSPH8 siRNA (h): sc-106234, MPHOSPH8 siRNA (m): sc-149530, MPHOSPH8 shRNA Plasmid (h): sc-106234-SH, MPHOSPH8 shRNA Plasmid (m): sc-149530-SH, MPHOSPH8 shRNA (h) Lentiviral Particles: sc-106234-V and MPHOSPH8 shRNA (m) Lentiviral Particles: sc-149530-V.

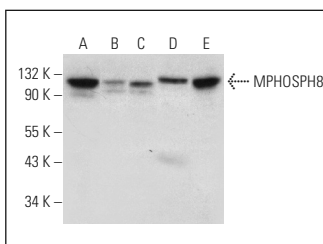
Molecular Weight of MPHOSPH8: 97 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, HeLa nuclear extract: sc-2120 or RT-4 whole cell lysate: sc-364257.

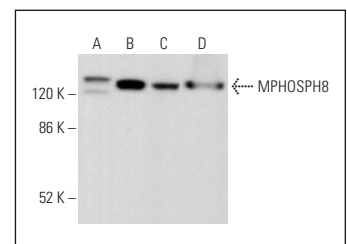
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



MPHOSPH8 (C-8): sc-398598. Western blot analysis of MPHOSPH8 expression in MIA PaCa-2 (A), HeLa (B), RT-4 (C) and U-251-MG (D) whole cell lysates and HeLa nuclear extract (E).



MPHOSPH8 (C-8): sc-398598. Western blot analysis of MPHOSPH8 expression in HeLa (A), U-251-MG (B) and MCF7 (C) whole cell lysates and HeLa nuclear extract (D). Detection reagent used: m-IgG $\kappa$  BP-HRP: sc-516102.

## SELECT PRODUCT CITATIONS

1. Skalska, L., et al. 2021. Nascent RNA antagonizes the interaction of a set of regulatory proteins with chromatin. *Mol. Cell* 81: 2944-2959.e10.

## STORAGE

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