

MACF1 (A-3): sc-377532



The Power to Question

BACKGROUND

MACF1 (microtubule-Actin cross-linking factor 1) is a 5,327 amino acid protein that is encoded by the human gene MACF1. MACF1 belongs to the plakin or cytolinker family and contains one Actin-binding domain, 2 CH (calponin-homology) domains, 2 EF-hand domains, one SH3 domain and 37 spectrin repeats. MACF1 is an F-Actin-binding protein which may play a role in cross-linking Actin to other cytoskeletal proteins and also binds to microtubules. The spectrin repeats, an important feature found in many proteins involved in cytoskeletal structure, forms a three helix bundle with the second helix (with proline interrupts in some sequences). MACF1 is a cytoplasmic protein expressed mainly in lung, brain, spinal cord, skeletal and cardiac muscle, and skin.

REFERENCES

1. Kakinuma, T., et al. 2004. Interaction between p230 and MACF1 is associated with transport of a glycosyl phosphatidyl inositol-anchored protein from the Golgi to the cell periphery. *Exp. Cell Res.* 298: 388-398.
2. Lin, C.M., et al. 2005. Microtubule Actin crosslinking factor 1 β : a novel plakin that localizes to the Golgi complex. *J. Cell Sci.* 118: 3727-3738.
3. Chen, H.J., et al. 2006. The role of microtubule Actin cross-linking factor 1 (MACF1) in the Wnt signaling pathway. *Genes Dev.* 20: 1933-1945.
4. Trinidad, J.C., et al. 2006. Comprehensive identification of phosphorylation sites in postsynaptic density preparations. *Mol. Cell. Proteomics* 5: 914-922.
5. Dai, J., et al. 2007. Protein phosphorylation and expression profiling by Yin-yang multidimensional liquid chromatography (Yin-yang MDLC) mass spectrometry. *J. Proteome Res.* 6: 250-262.

CHROMOSOMAL LOCATION

Genetic locus: Macf1 (mouse) mapping to 4 D2.2.

SOURCE

MACF1 (A-3) is a mouse monoclonal antibody raised against amino acids 1997-2240 mapping within an internal region of MACF1 of mouse origin.

PRODUCT

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

MACF1 (A-3) is available conjugated to agarose (sc-377532 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377532 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377532 PE), fluorescein (sc-377532 FITC), Alexa Fluor[®] 488 (sc-377532 AF488), Alexa Fluor[®] 546 (sc-377532 AF546), Alexa Fluor[®] 594 (sc-377532 AF594) or Alexa Fluor[®] 647 (sc-377532 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-377532 AF680) or Alexa Fluor[®] 790 (sc-377532 AF790), 200 μ 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

MACF1 (A-3) is recommended for detection of MACF1 of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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 MACF1 siRNA (m): sc-75725, MACF1 shRNA Plasmid (m): sc-75725-SH and MACF1 shRNA (m) Lentiviral Particles: sc-75725-V.

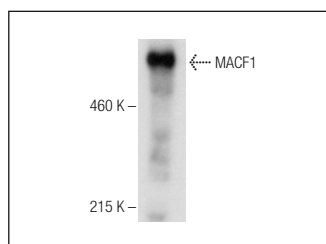
Molecular Weight of MACF1: 608 kDa.

Positive Controls: mouse brain extract: sc-2253 or rat brain extract: sc-2392.

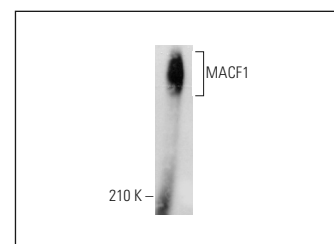
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] 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 κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



MACF1 (A-3): sc-377532. Western blot analysis of MACF1 expression in mouse brain tissue extract.



MACF1 (A-3): sc-377532. Western blot analysis of MACF1 expression in rat brain tissue extract.

SELECT PRODUCT CITATIONS

1. Wang, X., et al. 2020. Decreasing microtubule Actin cross-linking factor 1 inhibits melanoma metastasis by decreasing epithelial to mesenchymal transition. *Cancer Manag. Res.* 12: 663-673.
2. Yan, G., et al. 2021. Deubiquitylation and stabilization of Acf7 by ubiquitin carboxylterminal hydrolase 14 (USP14) is critical for NSCLC migration. *J. Biosci.* 46: 19.

STORAGE

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