

# MACF1-4 (H-220): sc-68429

## BACKGROUND

MACF1-4 (microtubule-Actin cross-linking factor 1, isoform 4) is a 5,327 amino acid protein that is encoded by the human gene MACF1. MACF1-4 belongs to the plakin or cytolinker family and contains one Actin-binding domain, two CH (calponin-homology) domains, two EF-hand domains, nineteen plectin repeats and 37 spectrin repeats. MACF1-4 is an F-Actin-binding protein which may play a role in cross-linking cytoskeletal proteins by binding intermediate filaments to the N-terminal plectin repeats and microtubules to the C-terminus. The spectrin repeats, an important feature found in many proteins involved in cytoskeletal structure, form a three helix bundle with the second helix (with proline interrupts in some sequences). MACF1-4 is a cytoplasmic protein expressed mainly in heart, lung, pituitary and placenta; it is not found in brain, kidney, liver, pancreas or skeletal muscle.

## 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 1b: 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.
6. Munton, R.P., et al. 2007. Qualitative and quantitative analyses of protein phosphorylation in naive and stimulated mouse synaptosomal preparations. *Mol. Cell. Proteomics* 6: 283-293.
7. Villén, J., et al. 2007. Large-scale phosphorylation analysis of mouse liver. *Proc. Natl. Acad. Sci. USA* 104: 1488-1493.

## CHROMOSOMAL LOCATION

Genetic locus: MACF1 (human) mapping to 1p34.3.

## SOURCE

MACF1-4 (H-220) is a rabbit polyclonal antibody raised against amino acids 1561-1780 mapping within an internal region of MACF1, isoform 4 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

MACF1-4 (H-220) is recommended for detection of MACF1, isoform 4 of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as a control antibody for MACF1 siRNA (h): sc-75724, MACF1 shRNA Plasmid (h): sc-75724-SH and MACF1 shRNA (h) Lentiviral Particles: sc-75724-V.

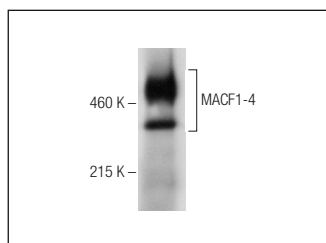
Molecular Weight of MACF1-4: 671 kDa.

Positive Controls: human lung extract: sc-363767.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



MACF1-4 (H-220): sc-68429. Western blot analysis of MACF1-4 expression in human lung tissue extract.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **MACF1-4 (D-10): sc-377534**, our highly recommended monoclonal alternative to MACF1-4 (H-220).