

# MSE55 (C-19): sc-10493

## BACKGROUND

MSE55 also known as Borg5 or binder of Rho GTPases 5 is a Cdc42 effector protein that induces long cellular extensions in fibroblasts. MSE55 also increases and mediates actin cytoskeleton reorganization at the plasma membrane. MSE55 is a nonkinase CRIB (Cdc42/Rac interactive-binding) domain-containing molecule. An intact CRIB domain is required for the GTP-dependent binding of MSE55 to Cdc42. MSE55 is expressed in a tissue-specific manner in endothelial and bone marrow stromal cells. MSE55 may have a functional role in hematopoiesis or as a negative regulator of Rho GTPase signaling.

## REFERENCES

1. Bahou, W.F., Campbell, A.D. and Wicha, M.S. 1992. cDNA cloning and molecular characterization of MSE55, a novel human serum constituent protein that displays bone marrow stromal/endothelial cell-specific expression. *J. Biol. Chem.* 267: 13986-13992.
2. Burbelo, P.D., Drechsel, D. and Hall, A. 1995. A conserved binding motif defines numerous candidate target proteins for both Cdc42 and Rac GTPases. *J. Biol. Chem.* 270: 29071-29074.
3. Neudauer, C.L., Joberty, G., Tatsis, N. and Macara, I.G. 1998. Distinct cellular effects and interactions of the Rho-family GTPase TC10. *Curr. Biol.* 8: 1151-1160.
4. Burbelo, P.D., Snow, D.M., Bahou, W. and Spiegel, S. 1999. MSE55, a Cdc42 effector protein, induces long cellular extensions in fibroblasts. *Proc. Natl. Acad. Sci. USA* 96: 9083-9088.
5. Joberty, G., Perlungher, R.R. and Macara, I.G. 1999. The Borgs, a new family of Cdc42 and TC10 GTPase-interacting proteins. *Mol. Cell. Biol.* 19: 6585-6597.

## CHROMOSOMAL LOCATION

Genetic locus: CDC42EP1 (human) mapping to 22q13.1.

## SOURCE

MSE55 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of MSE55 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.

Blocking peptide available for competition studies, sc-10493 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## PROTOCOLS

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

## APPLICATIONS

MSE55 (C-19) is recommended for detection of MSE55 of mouse and 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).

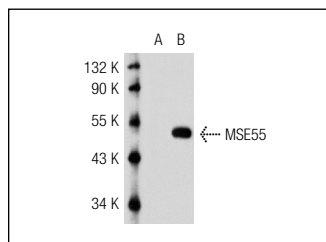
MSE55 (C-19) is also recommended for detection of MSE55 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MSE55 siRNA (h): sc-41802, MSE55 siRNA (m): sc-41803, MSE55 shRNA Plasmid (h): sc-41802-SH, MSE55 shRNA Plasmid (m): sc-41803-SH, MSE55 shRNA (h) Lentiviral Particles: sc-41802-V and MSE55 shRNA (m) Lentiviral Particles: sc-41803-V.

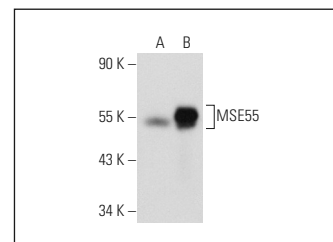
Molecular Weight of MSE55: 55 kDa.

Positive Controls: MSE55 (h3): 293T Lysate: sc-175134, MSE55 (m): 293T Lysate: sc-121795 or ECV304 cell lysate: sc-2269.

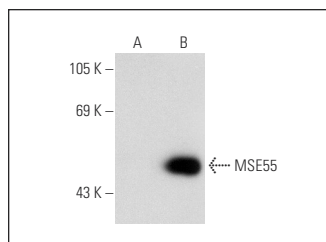
## DATA



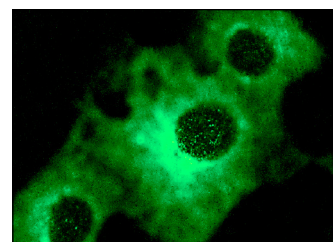
MSE55 (C-19): sc-10493. Western blot analysis of MSE55 expression in non-transfected: sc-117752 (A) and mouse MSE55 transfected: sc-121795 (B) 293T whole cell lysates.



MSE55 (C-19): sc-10493. Western blot analysis of MSE55 expression in non-transfected: sc-117752 (A) and human MSE55 transfected: sc-175134 (B) 293T whole cell lysates.



MSE55 (C-19): sc-10493. Western blot analysis of MSE55 expression in non-transfected: sc-117752 (A) and mouse MSE55 transfected: sc-121796 (B) 293T whole cell lysates.



MSE55 (C-19): sc-10493. Immunofluorescence staining of methanol-fixed ECV304 cells showing cytoplasmic localization.

## RESEARCH USE

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

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Try **MSE55 (D-5): sc-376360**, our highly recommended monoclonal alternative to MSE55 (C-19).