

MSE55 (D-5): sc-376360

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; Cdc42ep1 (mouse) mapping to 15 E1.

SOURCE

MSE55 (D-5) is a mouse monoclonal antibody raised against amino acids 126-219 mapping within an internal region of MSE55 of human origin.

PRODUCT

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

MSE55 (D-5) is available conjugated to agarose (sc-376360 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376360 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376360 PE), fluorescein (sc-376360 FITC), Alexa Fluor® 488 (sc-376360 AF488), Alexa Fluor® 546 (sc-376360 AF546), Alexa Fluor® 594 (sc-376360 AF594) or Alexa Fluor® 647 (sc-376360 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376360 AF680) or Alexa Fluor® 790 (sc-376360 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

MSE55 (D-5) is recommended for detection of MSE55 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

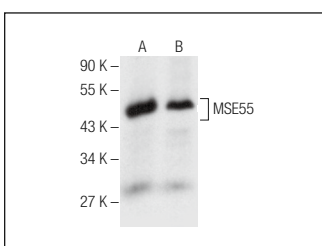
Molecular Weight of MSE55: 55 kDa.

Positive Controls: ECV304 cell lysate: sc-2269, Sol8 cell lysate: sc-2249 or HEL 92.1.7 cell lysate: sc-2270.

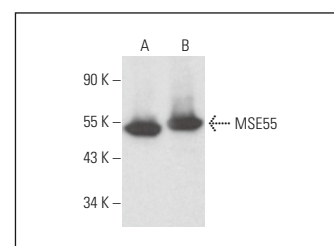
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



MSE55 (D-5): sc-376360. Western blot analysis of MSE55 expression in ECV304 (A) and HEL 92.1.7 (B) whole cell lysates.



MSE55 (D-5): sc-376360. Western blot analysis of MSE55 expression in Sol8 (A) and C6 (B) whole cell lysates.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.