SANTA CRUZ BIOTECHNOLOGY, INC.

MSE55 (H-94): sc-292477

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 both 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., et al. 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., et al. 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., et al. 1998. Distinct cellular effects and interactions of the Rho-family GTPase TC10. Curr. Biol. 8: 1151-1160.
4. Burbelo, P.D., et al. 1999. MSE55, a Cdc42 effector protein, induces long cellular extensions in fibroblasts. Proc. Natl. Acad. Sci. USA 96: 9083-9088.
5. Joberty, G., et al. 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 (H-94) is a rabbit polyclonal antibody raised against amino acids 126-219 mapping within an internal region 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.

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 or our catalog for detailed protocols and support products.

APPLICATIONS

MSE55 (H-94) is recommended for detection of MSE55 of human and, to a lesser extent, mouse and rat 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 (H-94) is also recommended for detection of MSE55 in additional species, including 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: ECV304 cell lysate: sc-2269.

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.