

Elmo1 (E-15): sc-21652

BACKGROUND

Elmo (engulfment and cell motility) proteins share similarity to *C. elegans* CED-12. The *C. elegans* genes *ced-2*, *ced-5*, *ced-10* and *ced-12* and their mammalian homologs Crk II, Dock1, Rac 1 and Elmo mediate cyto-skeletal rearrangements during phagocytosis of apoptotic cells and cell motility. Elmo1 associates with DOCK 180 and may influence phagocytosis and effect cell shape changes. Src family kinase mediated tyrosine phosphorylation of ELMO1 influences signaling through Elmo1/Crk/DOCK 180 pathways. Elmo2 interacts directly with Rho G in a GTP-dependent manner and forms a ternary complex with DOCK 180 to induce activation of Rac 1. The Rho G-Elmo2-DOCK 180 pathway is required for activation of Rac 1 and cell spreading mediated by integrin, as well as for neurite outgrowth induced by nerve growth factor. Elmo3 acts in association with DOCK 180 and Crk II and may be required in complex with DOCK 180 to activate Rac/Rho small GTPases.

REFERENCES

1. Gumienny, T.L., et al. 2001. CED-12/Elmo, a novel member of the Crk II/DOCK 180/Rac pathway, is required for phagocytosis and cell migration. *Cell* 107: 27-41.
2. Brugnera, E., et al. 2002. Unconventional Rac-GEF activity is mediated through the DOCK 180-Elmo complex. *Nat. Cell Biol.* 4: 574-582.
3. Katoh, H., et al. 2003. Rho G activates Rac 1 by direct interaction with the DOCK 180-binding protein Elmo. *Nature* 424: 461-464.
4. Sanui, T., et al. 2003. DOCK2 regulates Rac activation and cytoskeletal reorganization through interaction with Elmo1. *Blood* 102: 2948-2950.
5. Lu, M., et al. 2004. PH domain of Elmo functions in trans to regulate Rac activation via DOCK 180. *Nat. Struct. Mol. Biol.* 11: 756-762.

CHROMOSOMAL LOCATION

Genetic locus: ELMO1 (human) mapping to 7p14.2; Elmo1 (mouse) mapping to 13 A2.

SOURCE

Elmo1 (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Elmo1 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-21652 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 or our catalog for detailed protocols and support products.

APPLICATIONS

Elmo1 (E-15) is recommended for detection of Elmo1 of mouse, rat 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).

Elmo1 (E-15) is also recommended for detection of Elmo1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Elmo1 siRNA (h): sc-40525, Elmo1 siRNA (m): sc-40526, Elmo1 shRNA Plasmid (h): sc-40525-SH, Elmo1 shRNA Plasmid (m): sc-40526-SH, Elmo1 shRNA (h) Lentiviral Particles: sc-40525-V and Elmo1 shRNA (m) Lentiviral Particles: sc-40526-V.

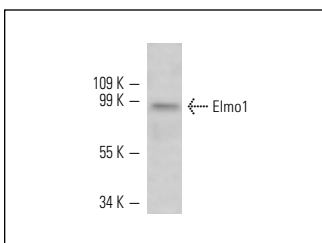
Molecular Weight of Elmo1: 84 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or MOLT-4 cell lysate: sc-2233.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Elmo1 (E-15): sc-21652. Western blot analysis of Elmo1 expression in Jurkat whole cell lysate.

RESEARCH USE

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

MONOS
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Try **Elmo1 (B-7): sc-271519** or **Elmo1 (C-3): sc-166661**, our highly recommended monoclonal alternatives to Elmo1 (E-15).