

# Elmo1 (C-3): sc-166661

## 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, CRKII, DOCK1, RAC1 and ELMO, mediate cytoskeletal rearrangements during phagocytosis of apoptotic cells as well as 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

- 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.
- Brugnera, E., et al. 2002. Unconventional Rac-GEF activity is mediated through the DOCK 180-Elmo complex. *Nat. Cell Biol.* 4: 574-582.

## CHROMOSOMAL LOCATION

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

## SOURCE

Elmo1 (C-3) is a mouse monoclonal antibody raised against full length Elmo1 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Elmo1 (C-3) is recommended for detection of Elmo1 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 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.

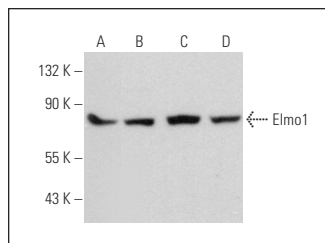
Molecular Weight of Elmo1: 84 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Elmo1 (m): 293T Lysate: sc-120003 or MOLT-4 cell lysate: sc-2233.

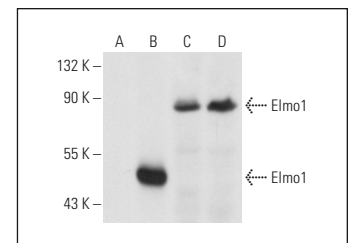
## RECOMMENDED SUPPORT REAGENTS

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



Elmo1 (C-3): sc-166661. Western blot analysis of Elmo1 expression in MOLT-4 (A), Raji (B), HL-60 (C) and CCRF-CEM (D) whole cell lysates.



Elmo1 (C-3): sc-166661. Western blot analysis of Elmo1 expression in non-transfected 293T: sc-117752 (A), mouse Elmo1 transfected 293T: sc-120003 (B), MOLT-4 (C) and Jurkat (D) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Lee, J., et al. 2014. Arhgef16, a novel Elmo1 binding partner, promotes clearance of apoptotic cells via RhoG-dependent Rac1 activation. *Biochim. Biophys. Acta* 1843: 2438-2447.
- Tamgue, O., et al. 2019. Differential targeting of c-Maf, Bach-1, and Elmo-1 by microRNA-143 and microRNA-365 promotes the intracellular growth of *Mycobacterium tuberculosis* in alternatively IL-4/IL-13 activated macrophages. *Front. Immunol.* 10: 421.

## 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](http://www.scbt.com) for detailed protocols and support products.