SANTA CRUZ BIOTECHNOLOGY, INC.

Elmo2 (I-18): sc-31908

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The Power to Question

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 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 RhoG-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 assocation with DOCK180 and Crk II and may be required in complex with DOCK180 to activate Rac/Rho small GTPases.

REFERENCES

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4. Sanui, T., et al. 2003. DOCK2 regulates Rac activation and cytoskeletal reorganization through interaction with Elmo1. Blood 102: 2948-2950.
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8. Akakura, S., et al. 2005. C-terminal SH3 domain of Crk II regulates the assembly and function of the DOCK 180/Elmo Rac-GEF. J. Cell. Physiol. 204: 344-351.
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CHROMOSOMAL LOCATION

Genetic locus: ELMO2 (human) mapping to 20q13.12, ELMO1 (human) mapping to 7p14.2; Elmo2 (mouse) mapping to 2 H3, Elmo1 (mouse) mapping to 13 A2.

SOURCE

Elmo2 (I-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Elmo2 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-31908 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Elmo2 (I-18) is recommended for detection of Elmo2 and, to a lesser extent, Elmo1 of mouse, rat, human and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Elmo2 (I-18) is also recommended for detection of Elmo2 and, to a lesser extent, Elmo1 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of Elmo2: 84 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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) 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.

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.