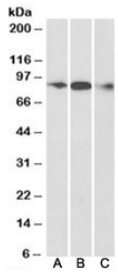
ELMO1 Goat Polyclonal Antibody / Engulfment and Cell Motility 1 Antibody (R35038)

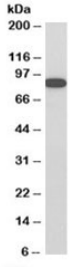
Catalog No.	Formulation	Size
R35038-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

Species Reactivity	Human, Mouse, Rat, Cow, Dog, Zebrafish
Predicted Reactivity	Dog
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	9844
Applications	Western blot: 0.1-0.3ug/ml Immunoprecipitation: suitable ELISA (peptide) LOD: 1:128000
Limitations	This ELMO1 Goat Polyclonal Antibody / Engulfment and Cell Motility 1 Antibody is available for research use only.



ELMO1 Goat Polyclonal Antibody WB Analysis of Human Frontal Cortex, Mouse Brain and Rat Brain. Western blot analysis of human frontal cortex (lane A), mouse brain (lane B), and rat brain (lane C) lysates using Engulfment and Cell Motility 1 Antibody at 0.3 ug/ml. The antibody was used to detect ELMO1, a cytoplasmic signaling protein with a predicted molecular weight of approximately 84 kDa.



ELMO1 Goat Polyclonal Antibody WB Analysis of Human Jurkat Cells. Western blot analysis of human Jurkat cell lysate using Engulfment and Cell Motility 1 Antibody at 0.3 ug/ml. The antibody was used to detect ELMO1, a cytoplasmic protein involved in Rac1-dependent signaling and actin cytoskeleton regulation. The predicted molecular weight of full-length ELMO1 is approximately 84 kDa.

Description

ELMO1 Goat Polyclonal Antibody / Engulfment and Cell Motility 1 Antibody recognizes ELMO1, a cytoplasmic signaling protein involved in actin cytoskeleton organization, cell migration, and apoptotic cell engulfment. ELMO1 belongs to the engulfment and cell motility protein family and is functionally related to CED-12, a component of the conserved signaling machinery responsible for cellular movement and the removal of dying cells. Rather than functioning as an enzyme independently, ELMO1 acts primarily through interactions with regulatory proteins that coordinate cytoskeletal rearrangements.

One of the best-characterized functions of ELMO1 involves its association with DOCK1, also known as DOCK180. Together, these proteins form a signaling complex that regulates the small GTPase Rac1. DOCK1 possesses guanine nucleotide exchange factor activity, promoting the conversion of Rac1 from its inactive GDP-bound state to its active GTP-bound state. ELMO1 contributes to the regulation and localization of this complex, helping coordinate Rac1 activation in response to extracellular signals. Activated Rac1 promotes actin polymerization and the formation of membrane protrusions required for cellular movement.

ELMO1 also participates in apoptotic cell engulfment, a process essential for maintaining tissue homeostasis. During apoptosis, dying cells display recognition signals that stimulate their removal by phagocytic cells. Receptor-associated signaling pathways recruit intracellular proteins that activate Rac1 and reorganize the actin cytoskeleton. ELMO1 contributes to this process by facilitating signaling events that allow phagocytes to extend their membranes around apoptotic material. Efficient clearance helps prevent the accumulation of cellular debris and limits inflammatory responses associated with secondary necrosis.

Beyond apoptotic cell clearance, ELMO1 contributes to cellular adhesion, migration, and directional movement. Its interactions with DOCK family proteins and other signaling partners influence cytoskeletal responses during development, tissue remodeling, and immune cell activity. Altered ELMO1 expression or signaling has been investigated in cancer cell migration and invasion, where changes in Rac1 activation can affect cellular behavior. ELMO1 has also been studied in vascular development and processes involving coordinated cell movement.

Because ELMO1 participates in several interconnected signaling pathways, its biological effects depend on the availability and activity of interacting proteins. ELMO1 Goat Polyclonal Antibody provides a reagent for examining this regulatory protein in studies of cytoskeletal dynamics, phagocytosis, Rac1 signaling, and the molecular mechanisms governing cell migration.

For an additional antibody targeting this regulator of Rac1 signaling and cell migration, see our ELMO1 Antibody 18E79, a rabbit monoclonal antibody supported by western blot testing of human cell lines and mouse and rat tissues.

Application Notes

Optimal dilution of the ELMO1 Goat Polyclonal Antibody / Engulfment and Cell Motility 1 Antibody should be determined by the researcher.

Immunogen

Amino acids PKEPSNYDFVYDCN were used as the immunogen for this ELMO1 antibody.

Storage

Aliquot and store the ELMO1 antibody at -20oC.

Alternate Names

Engulfment and cell motility protein 1 antibody, ELMO domain-containing protein 1 antibody, CED-12 homolog antibody, KIAA0281 antibody, ELMO1 goat antibody, Goat anti-ELMO1 antibody

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