Revision 1

Store at -20C

#14457

ELMO1 (D4K2E) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H	Endogenous	80	Rabbit IgG	#Q92556	9844

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

Specificity/Sensitivity

ELMO1 (D4K2E) Rabbit mAb recognizes endogenous levels of total ELMO1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala567 of human ELMO1 protein.

Background

Engulfment and cell motility 1 (ELMO1) is a cell motility and migration protein that interacts with DOCK180 to form an atypical, two-part guanine nucleotide exchange factor (GEF) for the small GTPase Rac (1). The resultant localized Rac activation allows actin nucleation via WAVE family proteins, signaling to integrins, formation of lamellipodia and filopodia, and regulation of processes including phagocytosis and cell migration (2-4). Research studies indicate that DOCK180 and ELMO1 regulate cell migration in lymphocytes (5) and in ovarian cancer cells (6). ELMO1 also promotes Rac1-dependent cell motility through its interaction with the adaptor protein Nck-1 (7), and binds Arhgef16 to promote RhoG/Rac1-dependent engulfment of apoptotic cells by phagocytes (8). Polymorphisms in the corresponding *ELMO1* gene may be associated with susceptibility to diabetic neuropathy seen in selected populations of type II diabetic patients (9,10).

Background References

1. Brugnera, E. et al. (2002) *Nat Cell Biol* 4, 574-82.
2. Takenawa, T. and Miki, H. (2001) *J Cell Sci* 114, 1801-9.
3. Albert, M.L. et al. (2000) *Nat Cell Biol* 2, 899-905.
4. Gustavsson, A. et al. (2004) *J Biol Chem* 279, 22893-901.
5. Stevenson, C. et al. (2014) *J Immunol* 192, 6062-70.
6. Wang, J. et al. (2014) *Int J Gynecol Cancer* 24, 844-50.
7. Zhang, G. et al. (2014) *J Biol Chem* 289, 23112-22.
8. Lee, J. et al. (2014) *Biochim Biophys Acta* 1843, 2438-2447.
9. Pezzolesi, M.G. et al. (2009) *Diabetes* 58, 2698-702.
10. Wu, H.Y. et al. (2013) *J Endocrinol Invest* 36, 298-302.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human

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Limited Uses

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