

PLEKHM1 (E9S3Q) Rabbit mAb

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Applications: W, IP	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 140	Source/Isotype: Rabbit IgG	UniProt ID: #Q9Y4G2	Entrez-Gene Id: 9842
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Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:100

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

PLEKHM1 (E9S3Q) Rabbit mAb recognizes endogenous levels of total PLEKHM1 protein. This antibody does not cross-react with Rubicon protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro455 of human PLEKHM1 protein.

Background

Pleckstrin homology domain-containing protein family member 1 (PLEKHM1) is a multivalent endolysosomal adaptor protein that contains an N-terminal RUN domain, two internal PH domains, and a C-terminal C1 domain/zinc-finger-like motif. Research studies have shown that PLEKHM1 plays a role in bone resorption by regulating the acidification of endosomal vesicles of osteoclasts. Loss-of-function mutations in *PLEKHM1* promote osteoclast failure and impair bone resorption, which leads to osteopetrosis (1-3). Recent studies have shown that PLEKHM1 serves as a nexus for different trafficking pathways of the endolysosomal network by serving as the platform for the recruitment of Rab7, HOPS complex, and LC3/GABARAP family members. Indeed, loss of PLEKHM1 impairs the lysosomal degradation of cell-surface receptors and autophagic clearance of protein aggregates (4,5).

Background References

1. Van Wesenbeeck, L. et al. (2007) *J Clin Invest* 117, 919-30.
2. Del Fattore, A. et al. (2008) *J Bone Miner Res* 23, 380-91.
3. Fujiwara, T. et al. (2016) *JCI Insight* 1, e86330.
4. McEwan, D.G. et al. (2015) *Mol Cell* 57, 39-54.
5. McEwan, D.G. et al. (2015) *Cell Host Microbe* 17, 58-71.

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 nonfat dry milk, 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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