

Anti-FHOD1 (Thr-1141), Phosphospecific Antibody

Catalog # AN1795

Specification

Anti-FHOD1 (Thr-1141), Phosphospecific Antibody - Product Information

Primary Accession Reactivity Host Clonality Isotype Calculated MW <u>09Y613</u> Bovine Rabbit Rabbit Polyclonal IgG 126551

Anti-FHOD1 (Thr-1141), Phosphospecific Antibody - Additional Information

Gene ID Other Names FHOS, formin

29109

Target/Specificity

Formins include several families of proteins that regulate actin cytoskeletal dynamics via two conserved formin homology domains, FH1 and FH2. The FH1 region contains poly-proline stretches that promote interactions with profilin. The FH2 domain, located C-terminally to the FH1 domain, is highly conserved in formin proteins and possesses actin nucleation and polymerization activities. Through cooperation of FH1 and FH2, formins construct actin-based structures comprising linear, unbranched filaments that are used in stress fibers, actin cables, microspikes, and contractile rings. Several mammalian formins, including mDia1, FRL, and formin homology domain protein 1 (FHOD1) are inhibited through an intramolecular interaction between the C-terminal Dia autoregulatory domain (DAD) and its recognition region at the N-terminus. In FHOD1, this autoinhibitory interaction is disrupted through phosphorylation of Ser-1131, Ser-1137, and Thr-1141 by ROCK. Subsequent FHOD1 activation leads to stress fiber formation. In endothelial cells, thrombin activates this ROCK pathway, leading to FHOD1-mediated stress fiber formation.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Anti-FHOD1 (Thr-1141), Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping Blue Ice

Anti-FHOD1 (Thr-1141), Phosphospecific Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

Western Blot



- <u>Blocking Peptides</u>
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

Anti-FHOD1 (Thr-1141), Phosphospecific Antibody - Images



Western blot of FHOD1 phosphorylation in human K562 cells stimulated with calyculin A (100 nM) for 30 min. (lanes 1 & 3). The blot was then treated with lambda phosphatase (lanes 2 & 4). Blots were probed with mouse polyclonal anti-FHOD1 (lanes 1 & 2) and anti-FHOD1 (Thr-1141), phospho-specific antibody (lanes 3 & 4).

Anti-FHOD1 (Thr-1141), Phosphospecific Antibody - Background

Formins include several families of proteins that regulate actin cytoskeletal dynamics via two conserved formin homology domains, FH1 and FH2. The FH1 region contains poly-proline stretches that promote interactions with profilin. The FH2 domain, located C-terminally to the FH1 domain, is highly conserved in formin proteins and possesses actin nucleation and polymerization activities. Through cooperation of FH1 and FH2, formins construct actin-based structures comprising linear, unbranched filaments that are used in stress fibers, actin cables, microspikes, and contractile rings. Several mammalian formins, including mDia1, FRL, and formin homology domain protein 1 (FHOD1) are inhibited through an intramolecular interaction between the C-terminal Dia autoregulatory domain (DAD) and its recognition region at the N-terminus. In FHOD1, this autoinhibitory interaction is disrupted through phosphorylation of Ser-1131, Ser-1137, and Thr-1141 by ROCK. Subsequent FHOD1 activation leads to stress fiber formation. In endothelial cells, thrombin activates this ROCK pathway, leading to FHOD1-mediated stress fiber formation.