

phospho-FHOD1 (Thr-1141) Peptide

Cat. # FX3485

Size 50 µg

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.

References

Westendorf, J.J. (2001) J Biol Chem. 276:46453.
Takeya, R. & Sumimoto, H. (2003) J Cell Sci. 116:4567.
Takeya, R. et al. (2008) EMBOJ 27:618.

Peptide Sequence:

Phospho-FHOD1 (Thr-1141) synthetic peptide corresponding to amino acid residues surrounding Thr-1141 in human FHOD1. This peptide sequence is highly conserved in rat and mouse FHOD1, and is well conserved in FHOD3 (Thr-1399).

Buffer and Storage:

Blocking Peptide is supplied in 50µl phosphate-buffered saline and 0.05% sodium azide. Store at -20°C. Stable for 1 year.

Applications:

Blocking 1:1000

ELISA 50 ng/well

End user should determine optimal concentration dependent on the concentration of the antibody.
Recommended for blocking antibody reactivity in Western blot and immunocytochemistry.
ELISA established in 96-well Nunc immunoplates where peptide was bound to plates for 2 hrs in 0.1 M sodium carbonate buffer, pH 8.5.

Specificity:

The peptide is specifically recognized by FHOD1 (Thr -1141) phospho-specific antibody (FP3481) in ELISA, and has been shown to block the reactivity of FP3481 in Western blot. In addition, the peptide is recommended for use in blocking FP3481 reactivity in immunocytochemistry.

Related Products:

FP3481 FHOD1 (Thr-1141), phospho-specific Rabbit Polyclonal
DP3491 mDia2 (C-terminal region) Rabbit Polyclonal
DX3495 mDia2 (C-terminal region) Peptide
AK6060 Actin & Tubulin Antibody Sampler Kit
AP1671 Actin (Tyr-53), phospho-specific Rabbit Polyclonal
RP1361 RhoA (Ser-188), phospho-specific Rabbit Polyclonal

FOR RESEARCH USE ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

www.ecmbiosciences.com
telephone: 859-879-2075
toll-free: 1-800-859-8202
email: info@ecmbiosciences.com

ECMBiosciences

Rev 7/1/2009