

#4145 Store at -20C

GEF-H1 Antibody



Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk B	Endogenous	120	Rabbit	#Q92974	9181

Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

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

Specificity/Sensitivity

GEF-H1 Antibody recognizes endogenous levels of total GEF-H1 protein. In human and monkey cells, the antibody cross-reacts with an unrelated 70 kDa protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the carboxy-terminus of human GEF-H1. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Rho family small GTPases regulate processes such as cell migration, adhesion, proliferation, and differentiation. They are activated by guanine nucleotide exchange factors (GEFs), which catalyze the exchange of GDP for GTP. GEF-H1 is a Rho GEF that localizes to microtubules and regulates Rho activity in response to microtubule destabilization (1). Loss of interaction between GEF-H1 and microtubules leads to activation of Rho (2). Phosphorylation of GEF-H1 at Ser886 (Ser885 in mouse), a site located in the 14-3-3 binding motif, has been implicated in recruitment of 14-3-3 and GEF-H1 to microtubules (3), and in the regulation of RhoA activity in response to mitotic kinases during cytokinesis (4). GEF-H1 has also been shown to localize to tight junctions and modulate polarized cell permeability (5,6). GEF-H1 is inactivated by binding to cingulin at epithelial tight junctions, inactivating RhoA and leading to G1/S arrest (6).

Background References

1. Ren, Y. et al. (1998) *J Biol Chem* 273, 34954-60.
2. Krendel, M. et al. (2002) *Nat Cell Biol* 4, 294-301.
3. Zenke, F.T. et al. (2004) *J Biol Chem* 279, 18392-400.
4. Birkenfeld, J. et al. (2007) *Dev Cell* 12, 699-712.
5. Benais-Pont, G. et al. (2003) *J Cell Biol* 160, 729-40.
6. Aijaz, S. et al. (2005) *Dev Cell* 8, 777-86.

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

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey **B:** Bovine

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any

purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.