



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

Store at -20C
#3237

Profilin-1 Antibody

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

Applications: W, IF-IC, FC-FP	Reactivity: H M R B	Sensitivity: Endogenous	MW (kDa): 15	Source/Isotype: Rabbit
---	-------------------------------	-----------------------------------	------------------------	----------------------------------

Product Usage Information

Application

Western Blotting
Immunofluorescence (Immunocytochemistry)
Flow Cytometry (Fixed/Permeabilized)

Dilution

1:1000
1:50
1:100

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

Profilin-1 Antibody detects endogenous levels of total profilin-1 protein. The antibody may cross-react with profilin-2.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to human profilin-1. Antibodies are purified using protein A and peptide affinity chromatography.

Background

The dynamic polymerization and depolymerization of actin filaments, a process governed by external and internal signaling events, is vital for cell motility (immune cell function, migration, invasion, metastasis, angiogenesis), cell division and adhesion. Among the many regulators of actin dynamics are profilins. Profilins are conserved actin binding proteins that affect the rate of actin polymerization by binding actin monomers and promoting the exchange of ADP for ATP (reviewed in 1). Profilins bind to proteins involved in the regulation of actin dynamics including palladin (2), dynamin-1 (3), VASP (4) and N-WASP (5). In mice, knockout of the ubiquitously expressed profilin-1 indicates that the protein is essential for embryonic development (6). Profilin-2 is primarily expressed in brain and functions in the regulation of neurite outgrowth (7), membrane trafficking and endocytosis (3). The recently cloned profilin-3 is expressed in kidney and testes (8).

Background References

1. Witke, W. (2004) *Trends Cell Biol* 14, 461-9.
2. Boukhelifa, M. et al. (2006) *FEBS J* 273, 26-33.
3. Gareus, R. et al. (2006) *J Biol Chem* 281, 2803-11.
4. Reinhard, M. et al. (1995) *EMBO J* 14, 1583-9.
5. Suetsugu, S. et al. (1998) *EMBO J* 17, 6516-26.
6. Witke, W. et al. (2001) *Proc Natl Acad Sci U S A* 98, 3832-6.
7. Da Silva, J.S. et al. (2003) *J Cell Biol* 162, 1267-79.
8. Hu, E. et al. (2001) *Exp Nephrol* 9, 265-74.

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 **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

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

Trademarks and Patents

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

Alexa Fluor is a registered trademark of Life Technologies Corporation.

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.