



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

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#4728

β2-Chimerin (2E3) Rat mAb

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

Applications: W	Reactivity: H M R	Sensitivity: Endogenous	MW (kDa): 47	Source/Isotype: Rat IgG2a	UniProt ID: #P52757	Entrez-Gene Id: 1124
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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, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

β2-Chimerin (2E3) Rat mAb recognizes endogenous levels of total β2-chimerin protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with full-length recombinant human β2-Chimerin.

Background

Chimerins are a family of GTPase-activating proteins (GAPs) that facilitate GTP hydrolysis by the small GTPase Rac, rendering it inactive and regulating cell shape, spreading and motility. Regulation of chimerin proteins occurs in response to growth factor receptor or G-protein coupled receptor activation followed by phospholipase C activation. Chimerins are among the growing number of phorbol ester and diacylglycerol (DAG) effector molecules that do not belong to the PKC family of isoenzymes (reviewed in 1,2). β2-chimerin is highly expressed in brain and pancreas, and its expression is down-regulated in malignant gliomas (3). β2-chimerin is also down-regulated in breast cancer, and its expression causes GAP activity-dependent cell cycle arrest in MCF-7 breast cancer cells (4). Signaling from the epidermal growth factor receptor (EGFR) activates β2-chimerin and allows its association with Rac1 at the plasma membrane (5). Also in response to EGF, diacylglycerol kinase (DGK) γ interacts with β2-chimerin, promotes its translocation to the plasma membrane, and regulate its GAP activity (6).

Background References

1. Yang, C. and Kazanietz, M.G. (2007) *Biochem J.* 403, 1-12.
2. Brose, N. and Rosenmund, C. (2002) *J. Cell Sci.* 115, 4399-4411.
3. Yuan, S. et al. (1995) *Cancer Res.* 55, 3456-3461.
4. Yang, C. et al. (2005) *J. Biol. Chem.* 280, 24363-24370.
5. Wang, H. et al. (2006) *EMBO J.* 25, 2062-2074.
6. Yasuda, S. et al. (2007) *FEBS Lett.* 581, 551-557.

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

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