

β2-Chimerin (2E3) Rat mAb

✓ 100 μl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #1124
Swiss-Prot Acc. #P52757

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W Endogenous	H, M, R	47 kDa	Rat IgG2a**

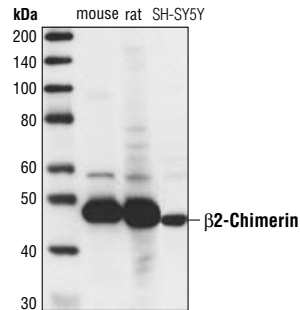
Background: Chimerins are a family of GTPase-activating proteins (GAPs) that facilitate GTP hydrolysis by the small GTPase Rac, rendering it inactive and regulating cell shape, spreading and motility. Regulation of chimerin proteins occurs in response to growth factor receptor or G-protein coupled receptor 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).

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 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.



Western blot analysis of extracts from mouse brain, rat brain and SH-SY5Y cells using β2-Chimerin (2E3) Rat mAb.

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.

*Species cross-reactivity is determined by western blot.

**Anti-rat secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.