

#3904 Store at -20°C

# Gα(z) Antibody

✓ 100 µl  
(10 western blots)

**Orders** ■ 877-616-CELL (2355)  
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rev. 06/23/10

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 #2781  
Swiss-Prot Acc. #P1908

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, M, R	40 kDa	Rabbit**

**Background:** Heterotrimeric guanine nucleotide-binding proteins (G proteins) consist of  $\alpha$ ,  $\beta$  and  $\gamma$  subunits and mediate the effects of hormones, neurotransmitters, chemokines and sensory stimuli. To date, over 20 known G $\alpha$  subunits have been classified into four families, G $\alpha$ (s), G $\alpha$ (i/o), G $\alpha$ (q) and G $\alpha$ (12), based on structural and functional similarities (1,2). Phosphorylation of Tyr356 of G $\alpha$ (q)/G $\alpha$ (11) is essential for activation of the G protein, since phenylalanine substitution for Tyr356 changes the interaction of G $\alpha$  with receptors and abolishes ligand-induced IP<sub>3</sub> formation (3).

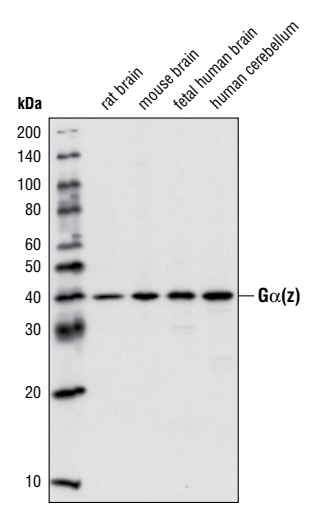
G $\alpha$ (z) stands out from other G proteins because it lacks an ADP-ribosylation consensus site for pertussis toxin, giving it a possible role in signal transduction pathways resistant to the toxin, such as phospholipase C (4). G $\alpha$ (z) is phosphorylated and activated by protein kinase C (PKC) at Ser27 (5,6).

**Specificity/Sensitivity:** G $\alpha$ (z) Antibody detects endogenous levels of total G $\alpha$ (z) protein.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to human G $\alpha$ (z). Antibodies are purified using protein A and peptide affinity chromatography.

**Background References:**

- (1) Offermanns, S. (2001) *Oncogene* 20, 1635–42.
- (2) Pierce, K.L. et al. (2002) *Nat Rev Mol Cell Biol* 3, 639–50.
- (3) Umemori, H. et al. (1997) *Science* 276, 1878–81.
- (4) Fong, H.K. et al. (1988) *Proc Natl Acad Sci USA* 85, 3066–70.
- (5) Fields, T.A. and Casey, P.J. (1995) *J Biol Chem* 270, 23119–25.
- (6) Ho, M.K. et al. *Biol Signals Recept* 9, 21–8.



Western blot analysis of extracts from various brain tissues using G $\alpha$ (z) Antibody.

**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-rabbit 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](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://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.