

#3992 Store at -20°C

# G $\alpha$ (pan) Antibody



100  $\mu$ l  
 (10 western blots)

**Orders** ■ 877-616-CELL (2355)  
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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.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP, IHC-P Endogenous	H, M, R, Mk, B	39, 41 kDa	Rabbit**

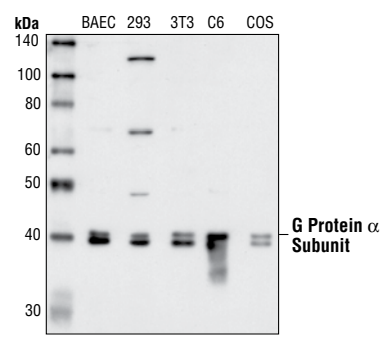
**Background:** Heterotrimeric guanine nucleotide-binding proteins (G proteins) consist of  $\alpha$ ,  $\beta$  and  $\gamma$  subunits and mediate the effects of hormones, neurotransmitters, chemokines and sensory stimuli. To date, over 20 known G- $\alpha$  subunits have been classified into four 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 tyrosine 356 of G- $\alpha$ (q)/G- $\alpha$ (11) is essential for activation of G protein, since phenylalanine substitution for Tyr356 changes the interaction of G- $\alpha$  with receptors and abolishes ligand-induced IP3 formation (3).

**Specificity/Sensitivity:** G $\alpha$  (pan) Antibody detects total levels of endogenous G protein  $\alpha$  subunits. The antibody may not detect G(12)- $\alpha$ , G(13)- $\alpha$  (13), G(s)- $\alpha$  (s) and G(olf)- $\alpha$ .

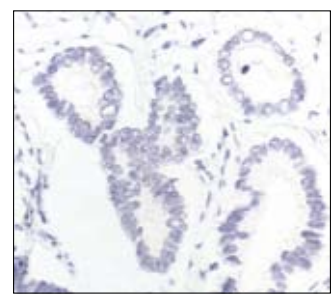
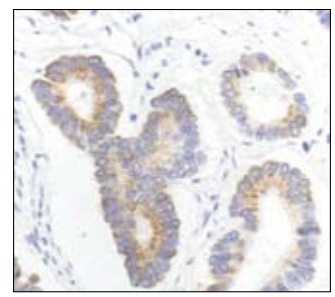
**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues of human guanine nucleotide-binding protein G $\alpha$  (q) subunit. Antibodies are purified by protein A and peptide affinity chromatography.

**Background References:**

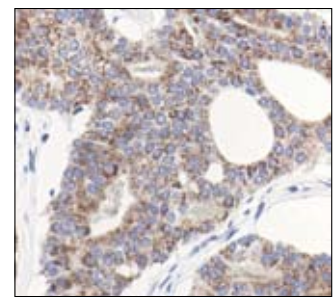
- (1) Offermanns, S. (2001) *Oncogene* 20, 1635–1642.
- (2) Pierce, J.L. et al. (2002) *Nat. Rev. Mol. Cell Biol.* 3, 639–650.
- (3) Umemori, H. et al. (1997) *Science* 276, 1878–1881.



Western blot analysis of extracts from BAEC, HEK293, NIH/3T3, C6 and COS cells, using G $\alpha$  (pan) Antibody.



Immunohistochemical analysis of paraffin-embedded human colon carcinoma, using G $\alpha$  (pan) Antibody in the presence of control peptide (upper) or antigen specific peptide (lower).



Immunohistochemical analysis of paraffin-embedded human prostate carcinoma using G $\alpha$  (pan) Antibody.

**Entrez-Gene ID** #2776  
**Swiss-Prot Acc.** #P50148

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/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
Immunoprecipitation	1:100
Immunohistochemistry (Paraffin)	1:100
Unmasking buffer:	Citrate
Antibody diluent:	TBST-5%NGS

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.