Revision 1

Store at -20C

#5290

Gα(i) Antibody

Cell Signaling TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	40	Rabbit	#P63096	2770

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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

Gα(i) Antibody detects endogenous levels of total Gα(i) protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Arg100 of human Gα(i). Antibodies are purified by protein A and peptide affinity chromatography.

Background

Heterotrimeric guanine nucleotide-binding proteins (G proteins) consist of α, β and γ subunits and mediate the effects of hormones, neurotransmitters, chemokines, and sensory stimuli. To date, over 20 known Gα subunits have been classified into four families, Gα(s), Gα(i/o), Gα(q) and Gα(12), based on structural and functional similarities (1,2). Phosphorylation of Tyr356 of Gα(q)/Gα(11) is essential for activation of the G protein, since phenylalanine substitution for Tyr356 changes the interaction of Gα with receptors and abolishes ligand-induced IP_3 formation (3).
Gα(i) causes inhibition of adenylate cyclase, leading to a decrease in cellular levels of cAMP. Pertussis toxin catalyzes ADP-ribosylation of Gα(i), which inactivates the Gα(i) protein and attenuates inhibition of adenylate cyclase (4).

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. Tsai, S.C. et al. (1984) *J Biol Chem* 259, 15320-3.

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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