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#3981

Gα(o) Antibody (IP Preferred)

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

Applications: IP	Reactivity: M	Sensitivity: Endogenous	MW (kDa): 40	Source/Isotype: Rabbit	UniProt ID: #P09471	Entrez-Gene Id: 2775
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Product Usage Information

Application

Immunoprecipitation

Dilution

1:50

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(o) Antibody (IP Preferred) detects endogenous levels of total Gα(o) protein and is recommended for immunoprecipitation.

Species predicted to react based on 100% sequence homology

Human, Rat

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Arg15 of human Gα(o). 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 IP₃ formation (3).

Gα(o) is the most abundant G protein in the brain and couples to serotonin, dopamine, GABA (B), opioid, glutamate and cholinergic receptors (4). Gα(o) *-/-* mice have neurological defects such as tremors, seizures and poor motor coordination (5).

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. Jiang, M. and Bajpayee, N.S. (2009) *Neurosignals* 17, 23-41.
5. Jiang, M. et al. (1998) *Proc Natl Acad Sci USA* 95, 3269-74.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

IP: Immunoprecipitation

Cross-Reactivity Key

M: Mouse

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