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#14373**Gα(q) (D5V1B) Rabbit mAb**

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	40	Rabbit IgG	#P50148	2776

**Product Usage Information****Application**

Western Blotting

**Dilution**

1:1000

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

Gα(q) (D5V1B) Rabbit mAb recognizes endogenous levels of total Gα(q) protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asn126 of human Gα(q) protein.

**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<sub>3</sub> formation (3). The Gα(q) guanine nucleotide-binding protein mediates communication between cell surface receptors and the key signal transduction enzyme phospholipase C-β (4). Mutations in the corresponding *GNAQ* gene can result in Sturge-Weber syndrome, a neurological and skin disorder characterized by facial port-wine stains, glaucoma, seizures, and mental retardation (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. Hubbard, K.B. and Hepler, J.R. (2006) *Cell Signal* 18, 135-50.
5. Shirley, M.D. et al. (2013) *N Engl J Med* 368, 1971-9.

**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 nonfat dry milk, 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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