SANTA CRUZ BIOTECHNOLOGY, INC.

p-Phd (Ser 73): sc-23774

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Phototransduction is a canonical G protein-mediated cascade of retinal photoreceptor cells that transforms photons into neural responses. Phosducin (Phd) is a Gbg-binding protein that is highly expressed in photoreceptors and localizes to the outer and inner segments of the rod cells. Phd is phosphorylated in dark-adapted retina and is dephosphorylated in response to light. Specifically, Phd is phosphorylated on Ser 54 and Ser 73 by Ca^{2+}/calmodulin-dependent kinase II, which leads to the binding of 14-3-3. Decreases in Ca^{2+} concentration block the interaction of Phd with 14-3-3, indicating that Ca^{2+} controls the phosphorylation state of Ser 54 and Ser 73 *in vivo*. Therefore, Phd plays a role in Ca^{2+}-dependent light adaptation processes in photoreceptor cells.

REFERENCES

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3. Gaudet, R., Bohm, A. and Sigler, P.B. 1996. Crystal structure at 2.4 angstroms resolution of the complex of transducin βγ and its regulator, phosducin. Cell 87: 577-588.
4. Boekhoff, I., Touhara, K., Danner, S., Inglese, J., Lohse, M.J., Breer, H. and Lefkowitz, R.J. 1997. Phosducin, potential role in modulation of olfactory signaling. J. Biol. Chem. 272: 4606-4612.
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CHROMOSOMAL LOCATION

Genetic locus: PDC (human) mapping to 1q31.1; Pdc (mouse) mapping to 1 G1.

SOURCE

p-Phd (Ser 73) is available as either goat (sc-23774) or rabbit (sc-23774-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Ser 73 phosphorylated Phd of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-23774 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

p-Phd (Ser 73) is recommended for detection of Ser 73 phosphorylated Phd of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p-Phd (Ser 73) is also recommended for detection of correspondingly phosphorylated Phd in additional species, including equine and canine.

Suitable for use as control antibody for Phd siRNA (h): sc-40839, Phd siRNA (m): sc-40840, Phd shRNA Plasmid (h): sc-40839-SH, Phd shRNA Plasmid (m): sc-40840-SH, Phd shRNA (h) Lentiviral Particles: sc-40839-V and Phd shRNA (m) Lentiviral Particles: sc-40840-V.

Molecular Weight of p-Phd: 33 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: for goat primary antibody (sc-23774): use donkey anti-goat IgG-HRP: sc-2020 (range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (range: 1:2000-1:5000), for rabbit primary antibody (sc-23774-R): use goat anti-rabbit IgG-HRP: sc-2004 (range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (range: 1:2000-1:5000); Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunofluorescence: for goat primary antibody (sc-23774): use donkey anti-goat IgG-FITC: sc-2024 (range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (range: 1:100-1:400), for rabbit primary antibody (sc-23774-R): use goat anti-rabbit IgG-FITC: sc-2012 (range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.