

GCAP3 (G-20): sc-79958

BACKGROUND

The intracellular stimulation of guanylate cyclase (GC) by calcium, a key event in the recovery of the dark state of rod photoreceptors after exposure to light, is mediated by guanylate cyclase-activating proteins (GCAP). GCAPs are calcium-binding proteins belonging to the calmodulin superfamily and are specifically expressed in retina. GCAP3 (guanylyl cyclase-activating protein 3), also known as GUCA1C (guanylate cyclase activator 1C), is a 209 amino acid EF-hand calcium binding protein that is activated by the decrease in calcium from the absorption of light by rhodopsin. Activation of GCAP3 leads to stimulation of guanylate cyclase 1 and 2 (GC1 and GC2), which increases cGMP concentration. Calcium sensitive regulation of GC is essential in recovery of the rod receptor dark state following light exposure. There are two isoforms of GCAP3 that are produced as a result of alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: GUCA1C (human) mapping to 3q13.13.

SOURCE

GCAP3 (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GCAP3 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-79958 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GCAP3 (G-20) is recommended for detection of GCAP3 of 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); non cross-reactive with family members GCAP1 or GCAP2.

GCAP3 (G-20) is also recommended for detection of GCAP3 in additional species, including equine.

Suitable for use as control antibody for GCAP3 siRNA (h): sc-75114, GCAP3 shRNA Plasmid (h): sc-75114-SH and GCAP3 shRNA (h) Lentiviral Particles: sc-75114-V.

Molecular Weight of GCAP3: 24 kDa.

Positive Controls: Y79 cell lysate: sc-2240.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

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.