

GCAP1 (h): 293T Lysate: sc-114427

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 protein (GCAP1). GCAPs are calcium-binding proteins belonging to the calmodulin superfamily. GCAP1 is a calcium-binding protein that stimulates synthesis of c-GMP in photoreceptors. GCAP1 is present in rod and cone photoreceptor outer segments where phototransduction occurs. In contrast to other calcium-binding proteins from the calmodulin superfamily, the calcium-free form of GCAP1 stimulates the effector enzyme. By molecular cloning of human and mouse GCAP cDNA, the known mammalian GCAPs are found to be more than 90% similar, consisting of 201 to 205 amino acids, and containing three identically conserved calcium-binding sites. A related protein, GCAP2, is detectable only in the retina and results from a gene duplication event.

REFERENCES

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- Sokal, I., Otto-Bruc, A.E., Surgucheva, I., Verlinde, C.L., Wang, C.K., Baehr, W. and Palczewski, K. 1999. Conformational changes in guanylyl cyclase-activating protein 1 (GCAP1) and its tryptophan mutants as a function of calcium concentration. *J. Biol. Chem.* 274: 19829-19837.
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- LocusLink Report (LocusID: 600364). <http://www.ncbi.nlm.nih.gov/LocusLink>

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

Genetic locus: GUCA1A (human) mapping to 6p21.1.

PRODUCT

GCAP1 (h): 293T Lysate represents a lysate of human GCAP1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

GCAP1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive GCAP1 antibodies. Recommended use: 10-20 µl per lane.

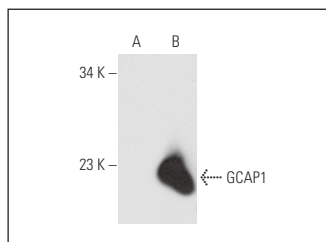
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

GCAP1 (G2G4): sc-59542 is recommended as a positive control antibody for Western Blot analysis of enhanced human GCAP1 expression in GCAP1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



GCAP1 (G2G4): sc-59542. Western blot analysis of GCAP1 expression in non-transfected: sc-117752 (A) and human GCAP1 transfected: sc-114427 (B) 293T whole cell lysate.

RESEARCH USE

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

PROTOCOLS

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