

## GCAP1 Protein, Human (sf9)

Cat. No.:	HY-P76944
Synonyms:	Guanylyl cyclase-activating protein 1; Guanylate cyclase activator 1A; C6orf131; GCAP; GUCA1; GUCA1A
Species:	Human
Source:	Sf9 insect cells
Accession:	P43080 (N-G&P, M1-G201)
Gene ID:	118142757
Molecular Weight:	Approximately 20 kDa

### PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20 mM Tris, 500 mM NaCl, 10% Glycerol, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	GCAP1 protein serves as a pivotal regulator in the visual system, exhibiting a dual role in modulating retinal guanylyl cyclase activity based on intracellular calcium concentrations. Under low free calcium ion conditions, GCAP1 stimulates retinal guanylyl cyclase, facilitating the recovery of the dark state in rod photoreceptors after exposure to light. Conversely, when the concentration of free calcium ions is elevated, GCAP1 inhibits guanylyl cyclase activity. This calcium-sensitive control mechanism represents a crucial aspect of the phototransduction process in rod photoreceptors. Additionally, GCAP1 may play a role in the light response and recovery of cone photoreceptors in bright light conditions. The protein functions as a homodimer, further contributing to its regulatory capabilities in the visual signaling pathway.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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