

SCGN Protein, Human (HEK293, His)

Cat. No.:	HY-P71042
Synonyms:	Secretagogin; SCGN; SECRET
Species:	Human
Source:	HEK293
Accession:	O76038 (M1-P276)
Gene ID:	10590
Molecular Weight:	Approximately 32.0 kDa

PROPERTIES

AA Sequence	<pre> M D S S R E P T L G R L D A A G F W Q V W Q R F D A D E K G Y I E E K E L D A F F L H M L M K L G T D D T V M K A N L H K V K Q Q F M T T Q D A S K D G R I R M K E L A G M F L S E D E N F L L L F R R E N P L D S S V E F M Q I W R K Y D A D S S G F I S A A E L R N F L R D L F L H H K K A I S E A K L E E Y T G T M M K I F D R N K D G R L D L N D L A R I L A L Q E N F L L Q F K M D A C S T E E R K R D F E K I F A Y Y D V S K T G A L E G P E V D G F V K D M M E L V Q P S I S G V D L D K F R E I L L R H C D V N K D G K I Q K S E L A L C L G L K I N P </pre>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
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 ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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	Secretagogin (SCGN) is a biomarker of neuroendocrine cells, and a gene product of the SCGN gene located on chromosome 6p22.3-p22.1. SCGN is a calcium binding protein that is highly expressed in neuroendocrine cells, and six EF-hand calcium-binding proteins are postulated to be involved in transmitting calcium signals to control cell proliferation. SCGN enhances pancreatic insulin secretion, and is a useful biomarker for endocrine tumors, stroke, and psychiatric conditions. SCGN also exerts a neuroprotective role in neurodegenerative diseases, such as Alzheimer's disease. In addition, RIN-5F insulinoma cell
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clones exhibit retarded cell growth following overexpression of SCGN, suggesting their involvement in growth control and differentiation or inhibition of cell replication by Ca^{2+} signal modulation^[1]. Extracellular SCGN is readily internalized into the C2C12 cells in an energy-dependent manner. SCGN internalizes via clathrin-mediated endocytosis, following which, SCGN localizes largely in the cytosol. Exogenous SCGN treatment induces a global proteomic reprogramming in C2C12 cells^[2]. SCGN is expressed largely in pancreatic β -cells, certain parts of the brain, and also in neuroendocrine tissues. The expression of SCGN is altered in several diseases, such as diabetes, cancers, and neurodegenerative disorders. In the presence of Ca^{2+} , SCGN efficiently prevents the aggregation of a broad range of model proteins in vitro. Ca^{2+} induces the conversion of a closed compact apo-SCGN conformation into an open extended holo-SCGN conformation via multistate intermediates, consistent with the augmentation of chaperone activity of SCGN^[3].

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA