

## SCGN Protein, Human (His)

Cat. No.:	HY-P76050
Synonyms:	Secretagogin; SCGN; SECRET
Species:	Human
Source:	E. coli
Accession:	O76038 (D2-P276)
Gene ID:	10590
Molecular Weight:	Approximately 34 kDa

### PROPERTIES

AA Sequence	<pre> 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 <sub>2</sub> 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	<p>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</p>
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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  $\text{Ca}^{2+}$  signal modulation<sup>[1]</sup>.

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<sup>[2]</sup>.

SCGN is expressed largely in pancreatic  $\beta$ -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  $\text{Ca}^{2+}$ , SCGN efficiently prevents the aggregation of a broad range of model proteins in vitro.  $\text{Ca}^{2+}$  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<sup>[3]</sup>.

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

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