# Biotechnology Inc.

## EnCor Secretagogin Rabbit Polyclonal Antibody

## **RPCA-SCGN**

Ordering Information Web www.encorbio.com Email admin@encorbio.com Phone 352-372-7022 Fax 352-372-7066

HGNC Name: SCGN UniProt: 076038 RRID: AB 2572380 Immunogen: Full-length recombinant human

secretagogin protein expressed in and purified from E.

Format: Affinity purified antibody at 1mg/mL in 50% PBS, 50% glycerol plus 5mM NaN<sub>3</sub> Storage: Store at 4°C for short term, for longer term

at -20°C Recommended dilutions: WB: 1:1,000-5,000 IF/ICC or IHC: 1:1,000-1:2,000

**References:** 

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2. Gartner W, et al. Cerebral expression and serum detectability of secretagogin, a recently cloned EF-hand Ca2+-binding protein. Cereb. Cortex 11:1161-9 (2001).

3. Mulder J, et al. Secretagogin is a Ca2+binding protein specifying sub population soft elencephalic neurons. P.N.A.S 106:22492-7 (2009)

4. Ilhan A, et al. Expression of secretagogin in clear-cell renal cell carcinomasis associated with a high metastasis rate. Hum. Pathol. 420:641-8 (2011).

5. Lai M, et al. Secretagogin, a novel neuroendocrine marker, has a distinct expression pattern from chromogranin A. Virchows Arch. 449:402-9 (2006)

6. Adolf K, et al. (2007). Secretagogin is a new neuroendocrine marker in the human prostate. Prostate 67:472-484 (2007)

7. Zurek J, Fedora M. The usefulness of S100B, NSE. GFAP. NF-H. secretagogin and Hsp70 as a predictive biomarker of outcome in children with traumatic brain injury. Acta Neurochin 154:93-103 (2012).

8. Maj M, et al. Novel insights into the distribution and functional aspects of the calcium binding protein Secretagogin from studies on rat brain and primary neuronal cell culture. Front. Mol. Neurosci. 5.84 (2012).



Western blot analysis of different tissue lysates using rabbit pAb to secretagogin, RPCA-SCGN, dilution 1:1,000, in green: [1] protein standard (red), [2] rat pancreas, [3] rat olfactory bulb, and [4] mouse olfactory bulb lysates. Bands at ~27kDa correspond to secretagogin protein.



Immunofluorescent analysis of a rat brain cerebellum section stained with rabbit pAb to secretagogin, RPCA-SCGN, dilution 1:1,000, in green, and costained with mouse mAb to calbindin, MCA-4H7, dilution 1:1,000 in red. The blue is DAPI staining of nuclear DNA. Following transcardial perfusion with 4% paraformaldehyde, brain was post fixed for 24 hours, cut to  $45\mu$ M, and free-floating sections were stained with the above antibodies. RPCA-SCGN antibody stains granule cells and interneurons while calbindin antibody reveals protein expressed in dendrites and perikarya of Purkinje cells in the molecular layer of the cerebellum.

#### **Background:**

Secretagogin is a member of the EF-hand superfamily of small Calcium-binding proteins which are widely expressed in cells and tissues. It was first cloned from pancreatic islets of Langerhans and neuroendocrine cells and is highly expressed in theses tissues (1). Initially it is thought to be restricted to neuroendocrine cells, but it is now evident that secretagogin is expressed in numerous brain regions (2,3). The expression pattern of secretagogin is not well conserved from rodents to humans, While human brain reveals an expression maximum in the cerebellum, in rat and mouse brain the highest expression is found in the olfactory bulbs. In the cerebellum the protein is highly expressed in basket and stellate cells. Secretagogin has been shown to be involved in insulin secretion from pancreatic beta cells and is a strong candidate as a biomarker for endocrine tumors (4). Similar to S100 $\beta$ , secretagogin may be a useful biomarker of neuronal damage, stroke, and eventually psychiatric conditions (2,5-7). Moreover, secretagogin has been hypothesized to exert a neuroprotective role in neurodegenerative diseases like Alzheimer's disease (8).

The RPCA-SCGN antibody was made against the full length recombinant human secretagogin protein expressed in and purified from *E. coli*. RPCA-SCGN works well on mammalian cells grown in culture and in sections including formalin fixed and paraffin embedded material, see under "Additional Info" tag for details. We also supply a chicken polyclonal antibody to this protein, CPCA-SCGN.

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### Abbreviation Key:

mAb—Monoclonal Antibody pAb—Polyclonal Antibody WB—Western Blot IF—Immunofluorescence ICC—Immunocytochemistry IHC—Immunohistochemistry E—ELISA Hu—Human Mo—Monkey Do—Dog Rt—Rat Ms—Mouse Co—Cow Pi—Pig Ho—Horse Ch—Chicken Dr-D. rerio Dm-D. melanogaster Sm-S. mutans Ce-C. elegans Sc-S. cerevisiae Sa-S. aureus Ec-E. coli.