

**Secretagogin (D4V1Y) XP<sup>®</sup> Rabbit mAb**

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IHC-P, IF-F	H M R	Endogenous	28	Rabbit IgG	#O76038	10590

**Product Usage Information****Application**

Western Blotting  
Immunoprecipitation  
Immunohistochemistry (Paraffin)  
Immunofluorescence (Frozen)

**Dilution**

1:1000  
1:50  
1:3200  
1:800

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

Secretagogin (D4V1Y) XP<sup>®</sup> Rabbit mAb recognizes endogenous levels of total secretagogin protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the carboxy terminus of human secretagogin protein.

**Background**

Calcium-binding proteins of different subfamilies regulate the second messenger calcium. Calbindin, calmodulin, S-100, parvalbumin, and troponin C are members of the low molecular weight calcium-binding protein family (1). Calbindin is expressed in discrete neuronal populations within the CNS and is thought to act as an intracellular calcium buffering protein. Most Purkinje cells express calbindin, which is expressed when neurons start to migrate and differentiate. In contrast, other calcium buffering proteins, such as parvalbumin, are expressed later during development and in parallel with increasing neuronal activity (2).

Secretagogin (SCGN) is a cytosolic calcium-binding protein with homology to calbindin-D28k (CALB1) and calretinin (CALB2). The secretagogin protein was isolated from pancreatic islets of Langerhans and insulinomas, and shows abundant pancreatic expression and reduced expression in thyroid, adrenal medulla, stomach, small intestine, and colon (3). Cloning and sequence analysis of the secretagogin cDNA indicate that the corresponding protein includes six, EF-hand calcium-binding domain tandem repeats (3). Interaction between secretagogin and vesicle trafficking proteins, including SNAP25, SNAP23, ARFGAP2, and DOC2A, suggests a possible role for SCGN in neurotransmitter and hormone release (4,5). Research studies examining secretagogin expression in fetal and developing brains point to a role for this calcium-binding protein in differentiation, brain wiring, and neuronal development (6).

**Background References**

1. Kawasaki, H. et al. (1998) *Biometals* 11, 277-95.
2. Bastianelli, E. (2003) *Cerebellum* 2, 242-62.
3. Wagner, L. et al. (2000) *J Biol Chem* 275, 24740-51.
4. Rogstam, A. et al. (2007) *Biochem J* 401, 353-63.
5. Bauer, M.C. et al. (2011) *Mol Biosyst* 7, 2196-204.
6. Alpár, A. et al. (2012) *Cell Signal* 24, 378-87.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin) **IF-F:** Immunofluorescence (Frozen)

**Cross-Reactivity Key**

**H:** Human **M:** Mouse **R:** Rat

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