

## Product datasheet for **TA328767**

### Cacng5 Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	IF, WB
Recommended Dilution:	WB: 1:200-1:2000; FC: 1:50-1:600
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)SESTVNVLMIRS, corresponding to amino acid residues 87-99 of rat Cav $\gamma$ 5. 1st extracellular loop.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN <sub>3</sub> .
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	calcium voltage-gated channel auxiliary subunit gamma 5
Database Link:	<a href="#">NP_542424</a> <a href="#">Entrez Gene 27091 Human</a> <a href="#">Entrez Gene 140723 Mouse</a> <a href="#">Entrez Gene 140726 Rat</a> <a href="#">Q8VHW8</a>

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**Background:**

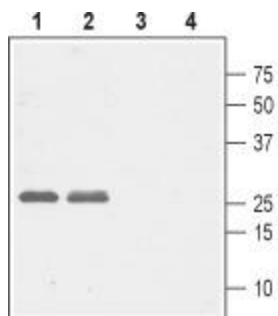
Voltage-gated Ca<sup>2+</sup> (CaV) channels are ubiquitously expressed and function as Ca<sup>2+</sup> conducting pores in the plasma membrane. On the basis of their voltage activation properties, the voltage-gated Ca<sup>2+</sup> channels can be further divided into two broad groups: the low (T-type) and high (L, N, P, Q and R-type) threshold-activated channels. CaV channels are heteromultimers composed of four independently encoded proteins, the pore-forming  $\alpha_1$  subunit, which triggers Ca<sup>2+</sup> flow across the membrane, and the auxiliary subunits  $\alpha_2\delta$ ,  $\beta$ , and  $\gamma$ . CaV $\beta$  subunits inhibit CaV channel activity and modulate its activation and inactivation kinetics. CaV $\gamma$  subunits have little effect on CaV channel trafficking. The  $\gamma$  subunit is an integral membrane protein. The  $\gamma$  subunit family consists of at least 8 members, which share a number of common structural features. Each member is predicted to possess four transmembrane domains, with intracellular N- and C-termini. The first extracellular loop contains a highly conserved N-glycosylation site and a pair of conserved cysteine residues. The CaV $\gamma_5$  subunit is highly expressed in the liver, kidney, heart, lung, skeletal muscles, and, with a lower abundance, in testes<sup>5</sup>. The close association of epilepsy and ataxia with mutations in other neuronal voltage-dependent Ca<sup>2+</sup> channels suggests these are potential candidate phenotypes for defects in the CaV $\gamma_5$  (CACNG5) gene.

**Synonyms:**

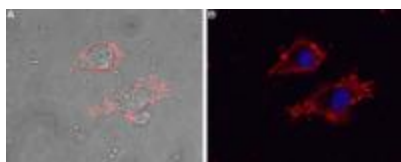
MGC126656; MGC126682

**Note:**

This antibody was tested in live cell imaging. Please see IF/ICC data for detail.

**Product images:**


Western blot analysis of rat brain (lanes 1 and 3) and mouse brain (lanes 2 and 4) lysates: 1, 2. Anti-CaV $\gamma_5$  (extracellular) antibody, (1:1000). 3, 4. Anti-CaV $\gamma_5$  (extracellular) antibody preincubated with the control peptide antigen.



Expression of CaV $\gamma_5$  in living rat PC12 cells. Immunocytochemical staining of intact living rat PC12 cells using Anti-CaV $\gamma_5$  (extracellular) antibody, (1:25) followed by goat anti-rabbit-AlexaFluor-594 secondary antibody. A. Extracellular staining (red) merged with live view of the cells. B. Extracellular staining merged with nuclear staining using DAPI as the counterstain (blue).