

## Product datasheet for **TA328699**

### GABA A Receptor alpha 3 (GABRA3) Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	IF, IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide QGESRRQEPGDFVKQ(C), corresponding to amino acid residues 29-43 of human GABA (A) $\alpha$ 3 Receptor. Extracellular, N-terminus.
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:	gamma-aminobutyric acid type A receptor alpha3 subunit
Database Link:	<a href="#">NP_000799</a> <a href="#">Entrez Gene 14396 Mouse</a> <a href="#">Entrez Gene 24947 Rat</a> <a href="#">Entrez Gene 2556 Human</a> <a href="#">P34903</a>



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**Background:**

The neurotransmitter GABA ( $\gamma$ -aminobutyric acid) inhibits the activity of signal-receiving neurons by interacting with the GABAA receptor on these cells. Binding of GABA to its GABAA receptor results in conformational changes that open a Cl channel, producing an increase in membrane conductance that results in inhibition of neural activity. There are two major types of GABA receptors: the ionotropic GABAA receptors (GABAAR) and the metabotropic GABAB receptors (GABABR). GABAARs belong to the ligand-gated ion channel superfamily. GABAARs are heteropentamers, in which all five subunits contribute to formation of the pore. Eight subunit isoforms have been cloned:  $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\delta$ ,  $\epsilon$ ,  $\rho$ ,  $\sigma$ , and  $\theta$ . Six  $\alpha$  subunits isoforms ( $\alpha$ 1- $\alpha$ 6) have been shown to exist in mammals. In most cases, the native GABAA receptors consist of 2 $\alpha$ , 2 $\beta$ , and 1 $\gamma$  subunits. The  $\alpha$ 3-subunit is highly expressed during development (along with  $\alpha$ 2 and  $\alpha$ 5) and then declines in adulthood, where the  $\alpha$ 1-subunit becomes predominant. The failure to complete this switch could be a major predispositional factor in the development of temporal lobe epilepsy.

**Synonyms:**

MGC33793

**Note:**

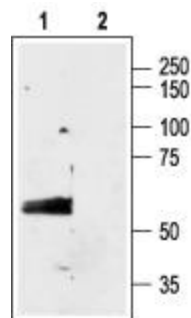
This antibody was tested in live cell imaging. Please see IF/ICC data for detail.

**Protein Families:**

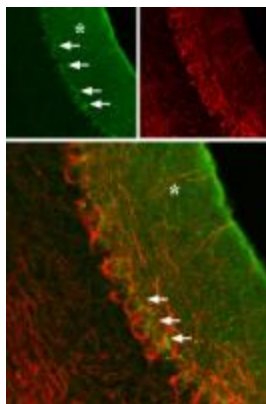
Druggable Genome, Ion Channels: Cys-loop Receptors, Transmembrane

**Protein Pathways:**

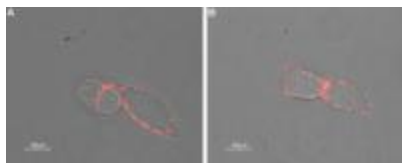
Neuroactive ligand-receptor interaction

**Product images:**


Western blot analysis of rat brain membranes: 1. Anti-GABA(A)  $\alpha$ 3 Receptor (extracellular) antibody, (1:200). 2. Anti-GABA(A)  $\alpha$ 3 Receptor (extracellular) antibody preincubated with the control peptide antigen.



Expression of GABA(A)  $\alpha$ 3 Receptor in rat cerebellum. Immunohistochemical staining of rat cerebellum using Anti-GABA(A)  $\alpha$ 3 Receptor (extracellular), (green), (1:100). GABA(A)  $\alpha$ 3 Receptor is localized to the molecular layer (asterisk) and a portion of the Purkinje cell body (arrows), which is outlined by axonal staining using mouse anti-neurofilament 200 (red).



Expression of GABA(A)  $\alpha$ 3 Receptor in rat insulinoma cell line. Immunocytochemical staining of intact living rat RIN-m cells using Anti-GABA(A)  $\alpha$ 3 Receptor (extracellular) antibody, (1:50) followed by goat anti-rabbit-AlexaFluor-550 secondary antibody. Extracellular staining (red) merged with live view of the cells.