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# GABRA2 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9297b

## Product Information

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| **Application** | IHC-P, FC, WB, E |
| **Primary Accession** | P47869 |
| **Other Accession** | P23576, P26048, P10063 |
| **Reactivity** | Human, Rat, Mouse |
| **Predicted** | Bovine, Mouse, Rat, Canine, Rabbit |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Calculated MW** | 51326 |
| **Antigen Region** | 378-406 |

## Additional Information

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| **Gene ID** | 2555 |
| **Other Names** | Gamma-aminobutyric acid receptor subunit alpha-2, GABA(A) receptor subunit alpha-2, GABRA2 |
| **Target/Specificity** | This GABRA2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 378-406 amino acids from the C-terminal region of human GABRA2. |
| **Dilution** | IHC-P~~1:100~500 FC~~1:10~50 WB~~1:1000 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification. |
| **Storage** | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | GABRA2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | GABRA2 ( HGNC:4076) |
| **Function** | Alpha subunit of the heteropentameric ligand-gated chloride channel gated by gamma-aminobutyric acid (GABA), a major inhibitory neurotransmitter in |

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| | the brain (PubMed:10449790, PubMed:29961870, PubMed:31032849). GABA-gated chloride channels, also named GABA(A) receptors (GABAAR), consist of five subunits arranged around a central pore and contain GABA active binding site(s) located at the alpha and beta subunit interfaces (By similarity). When activated by GABA, GABAARs selectively allow the flow of chloride anions across the cell membrane down their electrochemical gradient (PubMed:10449790). Chloride influx into the postsynaptic neuron following GABAAR opening decreases the neuron ability to generate a new action potential, thereby reducing nerve transmission (By similarity). The alpha-2 subunit exhibits synaptogenic activity together with beta-2 and very little to no activity together with beta-3, the gamma-2 subunit being necessary but not sufficient to induce rapid synaptic contacts formation (By similarity). |
| **Cellular Location** | Postsynaptic cell membrane {ECO:0000250\|UniProtKB:P26048}; Multi-pass membrane protein. Cell membrane {ECO:0000250\|UniProtKB:P26048}; Multi-pass membrane protein. Cytoplasmic vesicle membrane {ECO:0000250\|UniProtKB:P23576}. Cell projection, dendrite {ECO:0000250\|UniProtKB:P26048} |

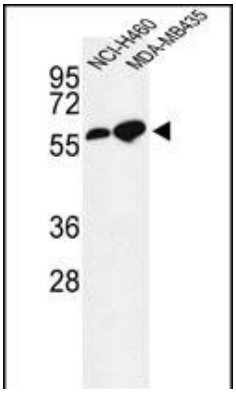
## Background

GABRA2 is the major inhibitory neurotransmitter in the mammalian brain where it acts at GABA-A receptors, which are ligand-gated chloride channels. Chloride conductance of these channels can be modulated by agents such as benzodiazepines that bind to the GABA-A receptor. At least 16 distinct subunits of GABA-A receptors have been identified.

## References

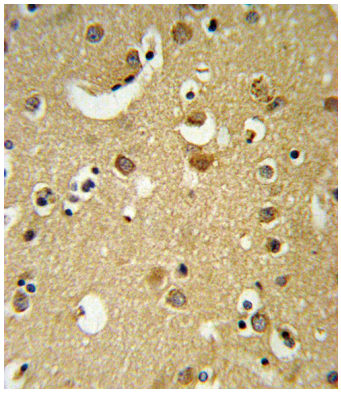
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Bierut,L.J., et.al., Proc. Natl. Acad. Sci. U.S.A. 107 (11), 5082-5087 (2010)
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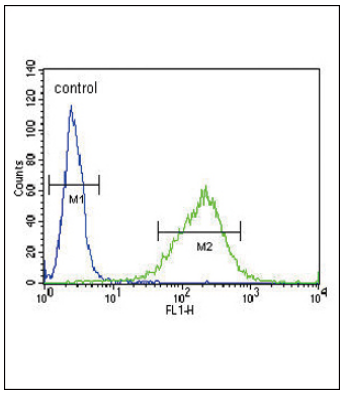
## Images




GABRA2 Antibody (C-term) (Cat. #AP9297b) western blot analysis in NCI-H460 cell line lysates (35ug/lane).This demonstrates the GABRA2 antibody detected the GABRA2 protein (arrow).

GABRA2 Antibody (C-term) (Cat. #AP9297b) IHC analysis in formalin fixed and paraffin embedded brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the GABRA2 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.






GABRA2 Antibody (C-term) (Cat. #AP9297b) flow cytometric analysis of NCI-H460 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

## Citations

- Ulk2 controls cortical excitatory-inhibitory balance via autophagic regulation of p62 and GABAA receptor trafficking in pyramidal neurons.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.