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GABRD Antibody (Center)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9299c

Specification

GABRD Antibody (Center) - Product Information

Application	**WB, FC, IHC-P,E**
Primary Accession	O14764
Other Accession	P22933
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**331-358**

GABRD Antibody (Center) - Additional Information

Gene ID 2563

Other Names
Gamma-aminobutyric acid receptor subunit delta, GABA(A) receptor subunit delta, GABRD

Target/Specificity
This GABRD antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 331-358 amino acids from the Central region of human GABRD.

Dilution
WB~~1:2000
FC~~1:10~50
IHC-P~~1:50~100
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
GABRD Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

GABRD Antibody (Center) - Protein Information

Name GABRD (HGNC:4084)

Function Delta subunit of the heteropentameric ligand-gated chloride channel gated by gamma-aminobutyric acid (GABA), a major inhibitory neurotransmitter in the brain (PubMed:35355020). 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 interface(s) (PubMed:35355020). When activated by GABA, GABAARs selectively allow the flow of chloride anions across the cell membrane down their electrochemical gradient (PubMed:35355020). GABAARs containing delta/GABRD subunits are predominantly located in extrasynaptic or perisynaptic positions on hippocampus and cerebellar granule cells, and contribute to the tonic GABAergic inhibition (By similarity). GABAAR containing alpha-4-beta-3-delta subunits can simultaneously bind GABA and histamine where histamine binds at the interface of two neighboring beta subunits, which may be involved in the regulation of sleep and wakefulness (PubMed:35355020).

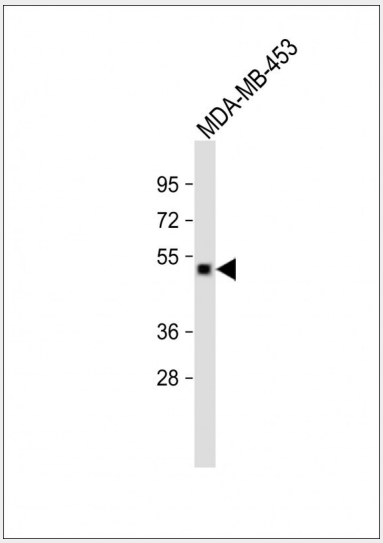
Cellular Location
Cell membrane {ECO:0000250|UniProtKB:P18506}; Multi-pass membrane protein

GABRD Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

GABRD Antibody (Center) - Images



All lanes : Anti-GABRD Antibody (Center) at 1:2000 dilution Lane 1: MDA-MB-453 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 51 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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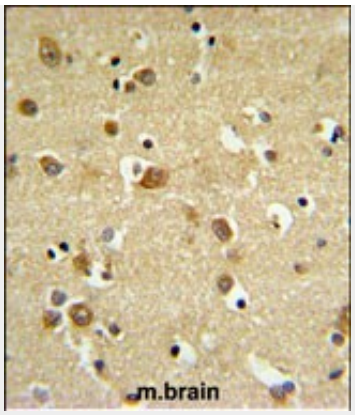
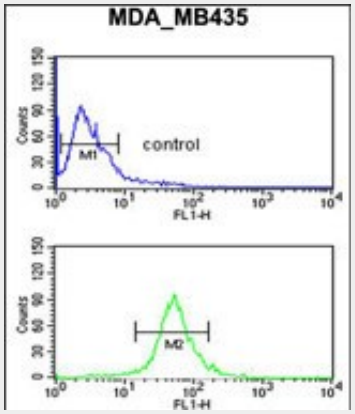


GABRD Antibody (Center) (Cat. #AP9299c) IHC analysis in formalin fixed and paraffin embedded brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the GABRD Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



GABRD Antibody (Center) (Cat. #AP9299c) flow cytometric analysis of MDA-MB435 cells (bottom histogram) compared to a negative control cell (top histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

GABRD Antibody (Center) - Background

GABRD 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. The GABA-A receptor is generally pentameric and there are five types of subunits: alpha, beta, gamma, delta, and rho. This protein encodes the delta subunit.

GABRD Antibody (Center) - References

Gratacos,M., et.al., Am. J. Med. Genet. B Neuropsychiatr. Genet. 150B (6), 808-816 (2009)
Maldonado-Aviles,J.G., et.al., Am J Psychiatry 166 (4), 450-459 (2009)
Tabakoff,B., et.al., BMC Biol. 7, 70 (2009)