

GABAA R α 4 Polyclonal Antibody
Catalog # AP70005**Specification**

GABAA R α 4 Polyclonal Antibody - Product Information

Application	WB
Primary Accession	P48169
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal

GABAA R α 4 Polyclonal Antibody - Additional Information**Gene ID** 2557**Other Names**

GABRA4; Gamma-aminobutyric acid receptor subunit alpha-4; GABA(A) receptor subunit alpha-4

Dilution

WB~~Western Blot: 1/500 - 1/2000. ELISA: 1/40000. Not yet tested in other applications.

Format

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

Storage Conditions

-20°C

GABAA R α 4 Polyclonal Antibody - Protein Information**Name** GABRA4 ([HGNC:4078](#))**Function**

Alpha 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 alpha-4 are predominantly extrasynaptic, contributing to tonic inhibition in dentate granule cells and thalamic relay neurons (By similarity). Extrasynaptic alpha-4-containing GABAARs control levels of excitability and network activity (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:Q9D6F4}; Multi-pass membrane protein {ECO:0000269|PubMed:35355020, ECO:0007744|PDB:7QN5}. Postsynaptic cell membrane; Multi-pass membrane protein {ECO:0000269|PubMed:35355020, ECO:0007744|PDB:7QN5}

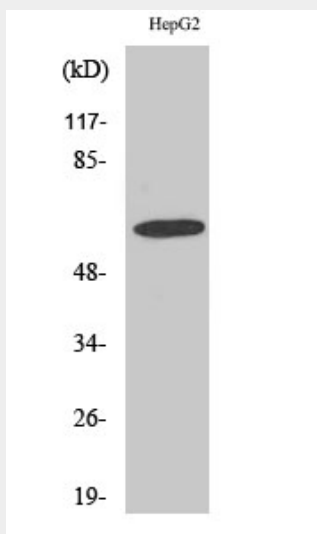
Tissue Location

Expressed in the brain. {ECO:0000250|UniProtKB:Q9D6F4}

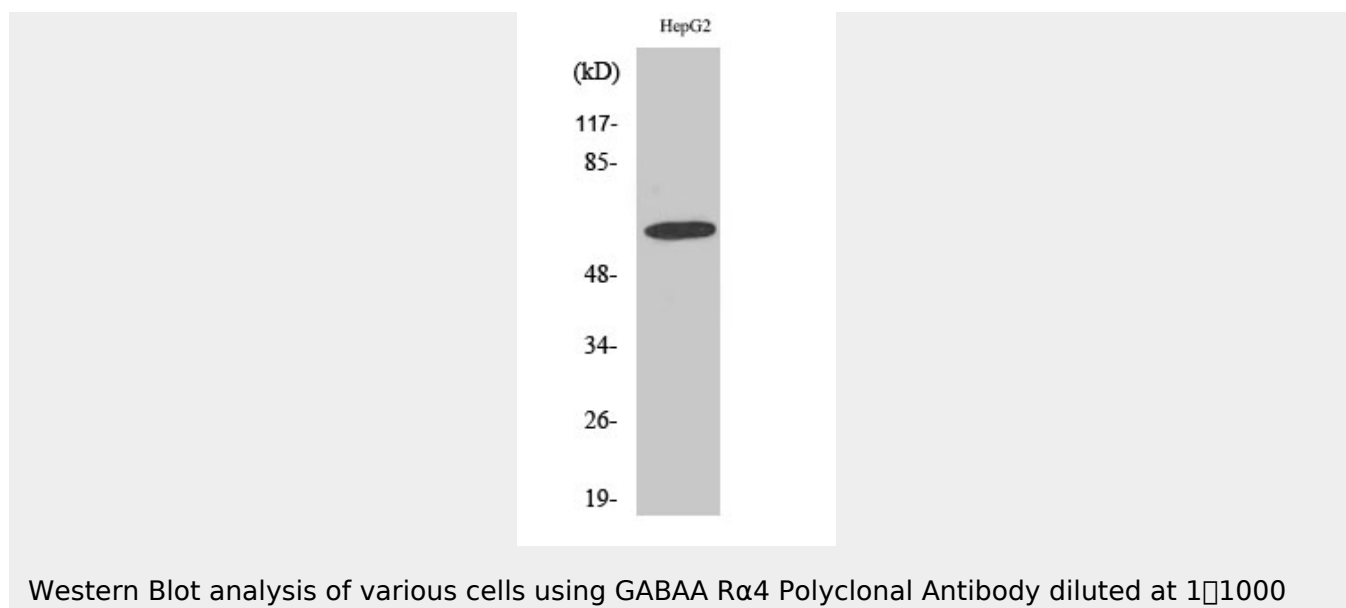
GABAA R α 4 Polyclonal Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

GABAA R α 4 Polyclonal Antibody - Images

Western Blot analysis of various cells using GABAA R α 4 Polyclonal Antibody diluted at 1:1000



GABAA R α 4 Polyclonal Antibody - Background

GABA, the major inhibitory neurotransmitter in the vertebrate brain, mediates neuronal inhibition by binding to the GABA/benzodiazepine receptor and opening an integral chloride channel.