# Anti-GABRA5 Antibody [JB34-19]

## ET7107-08

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| **Product Type:** | Recombinant Rabbit monoclonal IgG, primary antibodies |
| **Species reactivity:** | Human, Mouse, Rat |
| **Applications:** | WB, IF-Tissue, IHC-P |
| **Molecular Wt:** | Predicted band size: 52 kDa |
| **Clone number:** | JB34-19 |

**Description:** Gamma-aminobutyric acid (GABA) A receptor, alpha 5, also known as GABRA5, is a protein which in humans is encoded by the GABRA5 gene. GABA is the major inhibitory neurotransmitter in the mammalian brain where it acts at GABAA receptors, which are ligand-gated chloride channels. Chloride conductance of these channels can be modulated by agents such as benzodiazepines that bind to the GABAA receptor. At least 16 distinct subunits of GABAA receptors have been identified. Transcript variants utilizing three different alternative non-coding first exons have been described. Recent research has produced several ligands which are moderately selective for GABAA receptors containing the α5 subunit. These have proved to be useful in investigating some of the side effects of benzodiazepine and nonbenzodiazepine drugs, particularly the effects on learning and memory such as anterograde amnesia. Inverse agonists at this subunit have nootropic effects and may be useful for the treatment of cognitive disorders such as Alzheimer's disease.

**Immunogen:** Recombinant protein within Human GABRA5 aa 1-240 / 462.

**Positive control:** A549 cell lysate, Neuro-2a cell lysate, C6 cell lysate, Mouse brain tissue lysate, mouse brain tissue, rat brain tissue, mouse cerebellum tissue.

**Subcellular location:** Postsynaptic cell membrane, Cell membrane.

**Database links:** SwissProt: P31644 Human | Q8BHJ7 Mouse | P19969 Rat

**Recommended Dilutions:**

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| **WB** | 1:2,000 |
| **IF-Tissue** | 1:500 |
| **IHC-P** | 1:1,000 |

**Storage Buffer:** 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw cycles.

**Purity:** Protein A affinity purified.

## Images

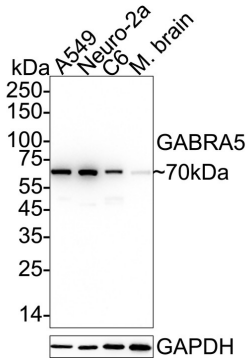


**Fig1:** Western blot analysis of GABRA5 on different lysates with Rabbit anti-GABRA5 antibody (ET7107-08) at 1/2,000 dilution.

Lane 1: A549 cell lysate (20 µg/Lane)
Lane 2: Neuro-2a cell lysate (20 µg/Lane)
Lane 3: C6 cell lysate (20 µg/Lane)
Lane 4: Mouse brain tissue lysate (40 µg/Lane)

Predicted band size: 52 kDa
Observed band size: 70 kDa

Exposure time: 1 minute; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET7107-08) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

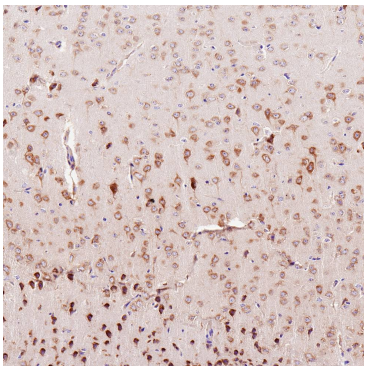

**Fig2:** Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Rabbit anti-GABRA5 antibody (ET7107-08) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with $ddH_2O$ and PBS, and then probed with the primary antibody (ET7107-08) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

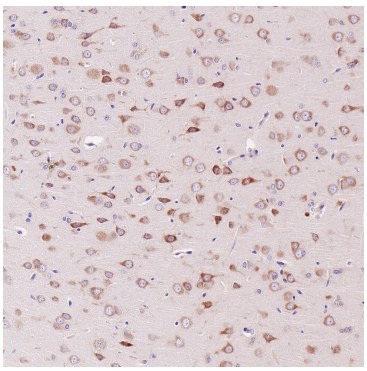

**Fig3:** Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rabbit anti-GABRA5 antibody (ET7107-08) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with $ddH_2O$ and PBS, and then probed with the primary antibody (ET7107-08) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

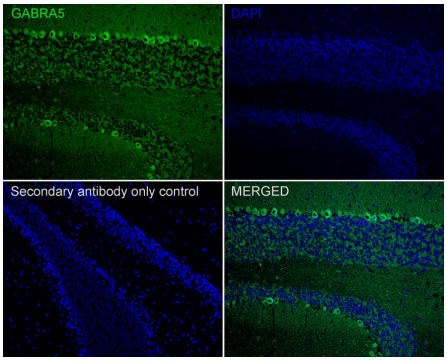


**Fig4:** Immunofluorescence analysis of paraffin-embedded mouse cerebellum tissue labeling GABRA5 with Rabbit anti-GABRA5 antibody (ET7107-08) at 1/500 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 10% negative goat serum for 1 hour at room temperature, washed with PBS, and then probed with the primary antibody (ET7107-08, green) at 1/500 dilution overnight at 4 ℃, washed with PBS. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. Nuclei were counterstained with DAPI (blue).



## Background References

1. Denis N J et al. Tryptic digestion of ubiquitin standards reveals an improved strategy for identifying ubiquitinated proteins by mass spectrometry. Proteomics 7:868-874 (2007).
2. Kaneko Y et al. Oxytocin modulates GABAAR subunits to confer neuroprotection in stroke in vitro. Sci Rep 6:35659 (2016).