

GABA antibody - Rabbit polyclonal Ab

Ref: IS1006

Immumol's anti-GABA antibody was validated in rat primary cortical cultures and murine brain tissues. Highly affine and specific, our rabbit polyclonal antibody against gamma-Aminobutyric acid proved to work at high dilutions (a single vial caters for approximately 100 IHF stainings).

Clonality	Polyclonal antibody
Host	Rabbit
Valided applications	<u>ICC</u> / <u>IHC</u> / <u>IHF</u>
Specie reactivity	Reacts with all species
References	Not yet cited to our knowledge. Submit content and get a 10% discount!
Format	50µl

Product information

Product overview

Product name	GABA antibody - Rabbit Polyclonal antibody
Synonyms	Anti- γ -Aminobutyric acid antibody Anti-gamma-Aminobutyric acid antibody
Immunogen	Conjugated GABA
Specificity	When tested in competitive ELISA, the anti-conjugated GABA antibody did not show any significant cross reactivity with gamma-Aminobutyric acid analogs, including beta-Alanine and D-Alanine.
Lot number	140301

Reconstitution & storage

Form	Lyophilized powder
Purity	Purified anti-serum
Storage	Store at 4°C
Storage buffer	Before use, vial should be resuspended in 50 μ L of ultrapure water. Store at +4°C for short term (1-2 weeks). Aliquot and store at -20°C for long term. Avoid repeated freeze / thaw cycles.

Protocols

Immunocytochemistry (ICC)	Dilute at 1:200-1:2000. After PFA fixation, cells are permeabilized in PBS/triton, and incubated overnight with primary antibody. Fluorescent secondary antibody is then used to visualize GABA.
Immunohistochemistry (IHC-P)	Dilute at 1:5000-1:15000 on paraffin-embedded. Perform heat antigen retrieval (pH=6) and incubate with HRP polymer-conjugated secondary antibody.
Immunohistofluorescence (IHF-free floating)	Brains from perfused animals are subjected to post-PFA fixation and vibratome slicing. Free-floating sections are incubated with primary antibody at dilution 1:100-1:1000. GABA is revealed with fluorescent secondary antibody conjugate.
Comments	Optimal working dilutions must be determined by the end-user
Restrictions	For research use only

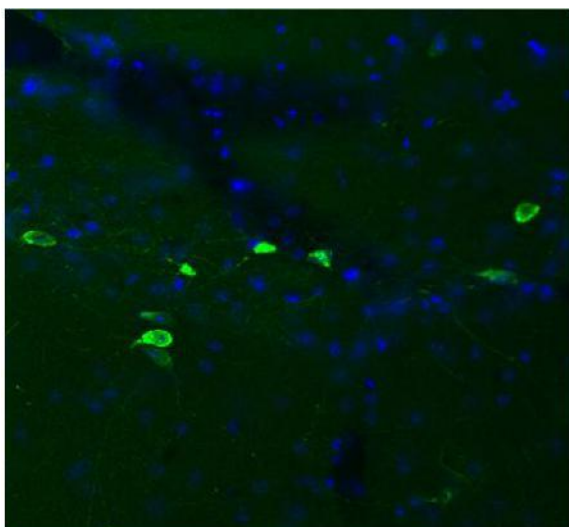
References

Antibody not yet cited. Submit an article and [get a 10%](#)

[discount](#). Selected articles on GABA:

- [Liu X, Wang Q, Haydar TF, Bordey A. Nonsynaptic GABA signaling in postnatal subventricular zone controls proliferation of GFAP-expressing progenitors. Nat Neurosci. 2005 Sep;8\(9\):1179-87. Epub 2005 Aug 14.](#)
- [Lawrence JJ. Cholinergic control of GABA release: emerging parallels between neocortex and hippocampus. Trends Neurosci. 2008 Jul;31\(7\):317-27. doi: 10.1016/j.tins.2008.03.008. Epub 2008 Jun 13.](#)
- [Baulac S, Huberfeld G, Gourfinkel-An I, Mitropoulou G, Beranger A, Prud'homme JF, Baulac M, Brice A, Bruzzone R, LeGuern E. First genetic evidence of GABA\(A\) receptor dysfunction in epilepsy: a mutation in the gamma2-subunit gene. Nat Genet. 2001 May;28\(1\):46-8.](#)

Product pictures



Detection of GABA in mouse cortex by IHF

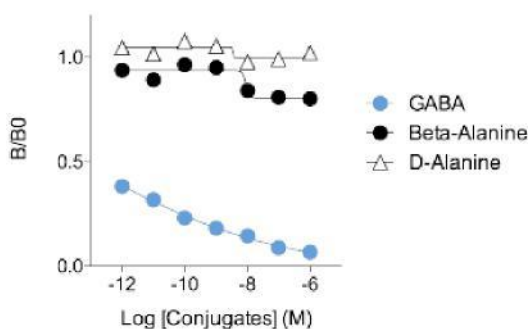
Immunohistochemistry highlights cytoplasmic accumulation of GABA in specific murine brain neurons. Free-floating brain section from PFA-perfused mouse was incubated 48h at 4°C with primary antibody (dilution 1/250). After incubation with Alexa-488 conjugated secondary Ab, epifluorescence microscopy (20X) was used to visualize IHF staining.



Gamma-aminobutyric acid (GABA)

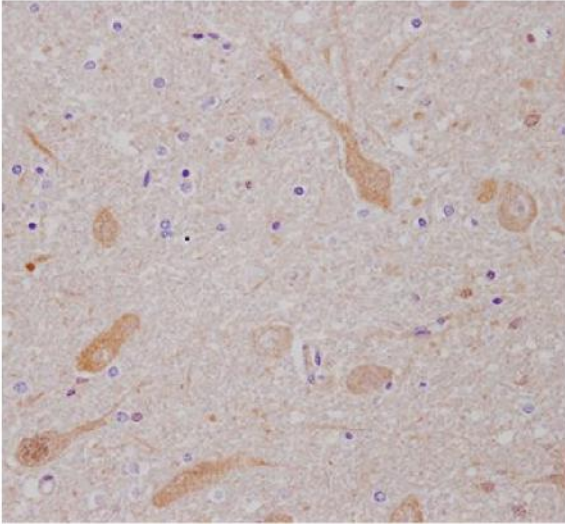
In the mammalian brain, inhibitory neurotransmitter Gamma-aminobutyric acid (GABA) is mainly synthesized from excitatory L-Glutamate by enzyme glutamic acid decarboxylase (GAD). Regulating neuronal excitability, GABAergic synapses are present throughout the CNS, although GABA is found most highly concentrated in the substantia nigra, the globus pallidus nuclei, the hypothalamus, the periaqueductal grey matter and the hippocampus.

Anti-GABA pAb (Rabbit)



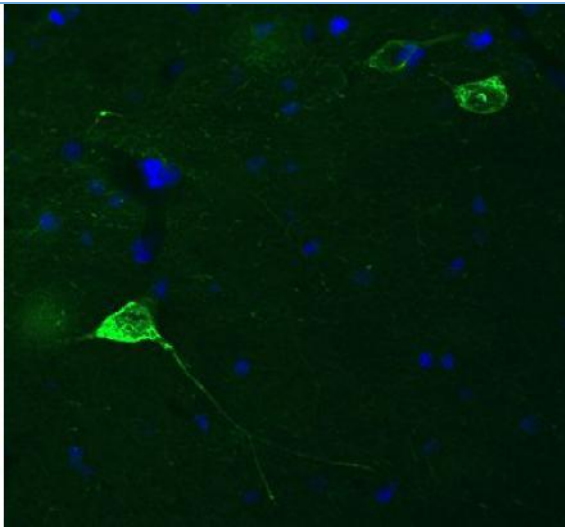
Affinity & specificity of anti-GABA antibody

Competitive ELISA demonstrates that low amounts of GABA conjugate are required to abolish antigen-antibody reaction (high affinity), while rising concentrations of β -Alanine and D-Alanine conjugates do not affect reaction (high specificity).



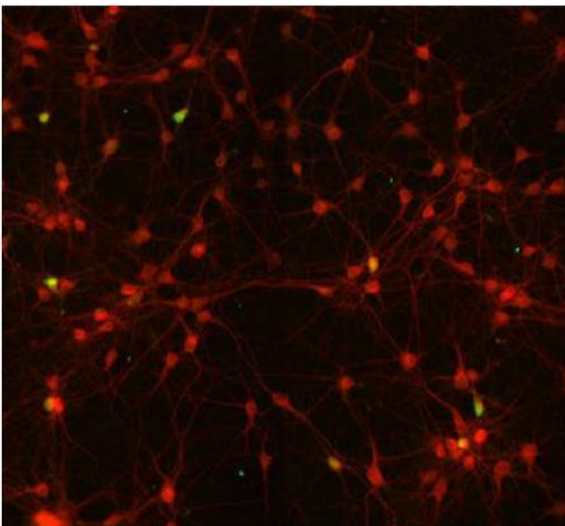
GABA detection in murine brain tissue by IHC

Detection of gamma-Aminobutyric acid in murine midbrain tissue. Paraffin-embedded tissue section was subjected to pH=6 antigen retrieval followed by overnight incubation with primary antibody (dilution 1/500). After incubation with polymer-conjugated secondary Ab, DAB was used to visualize the staining.



GABA visualization in mouse cortex by IHF

Immunofluorescence staining reveals cytoplasmic presence of GABA in specific murine brain neurons. Free-floating brain section from PFA-perfused animals was incubated 48h at 4°C with primary antibody (dilution 1/250). After incubation with Alexa-488 conjugated secondary Ab, epifluorescence microscopy (20X) was used to visualize IHF staining.



GABA detection in primary cortical culture

Co-staining of GABA (green) and MAP2 (red) in a primary cortical culture from a E19 rat embryo. 10 days after primary culture isolation, cells were fixed with PFA, permeabilized in PBS/triton 0.1% for 10 minutes and blocked in PBS / normal goat serum (5%) / triton 0.01% for 30 minutes. Cells were incubated overnight with primary GABA antibody (dilution 1/1000) and an anti-MAP2 antibody. After washes in PBS, secondary antibodies were applied and cells were put in PBS/hoechst before confocal imaging. Picture used with courtesy of Fluofarma.

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