

## Product datasheet for **AP06130PU-N**

### **GAD67 (GAD1) Rabbit Polyclonal Antibody**

#### **Product data:**

|                         |   |
|-------------------------|---|
| Product Type:           | Primary Antibodies  |
| Applications:           | IHC, WB   |
| Recommended Dilution:   | <b>Western blot:</b> 1/500-1/1000.<br><b>Immunohistochemistry on paraffin sections</b> 1/50-1/200.  |
| Reactivity:             | Human, Mouse, Rat   |
| Host:                   | Rabbit  |
| Clonality:              | Polyclonal  |
| Immunogen:              | Synthetic peptide, corresponding to amino acids 460-514 of Human GAD-67.  |
| Specificity:            | The antibody detects endogenous levels of GAD67 protein.<br>(region surrounding Ala492)   |
| Formulation:            | Phosphate buffered saline (PBS), pH 7.2.<br>State: Aff - Purified<br>State: Liquid purified Ig fraction<br>Preservative: 0.05% Sodium azide |
| Concentration:          | 1.0 mg/ml   |
| Purification:           | Affinity-chromatography using epitope-specific immunogen and the purity is > 95% (by SDS-PAGE)  |
| Conjugation:            | Unconjugated  |
| Storage:                | Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.<br>Avoid repeated freezing and thawing.                        |
| Stability:              | Shelf life: one year from despatch.   |
| Predicted Protein Size: | ~ 67 kDa  |
| Gene Name:              | glutamate decarboxylase 1   |
| Database Link:          | <a href="#">Entrez Gene 2571 Human Q99259</a>   |



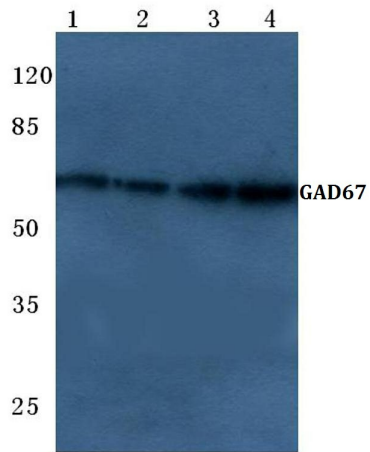
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**Background:**

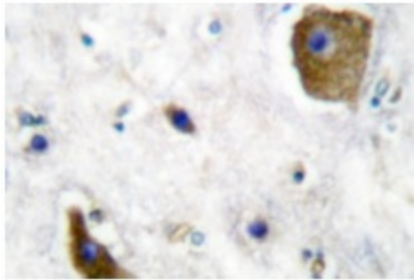
GAD-65 and GAD-67 are members of the group II decarboxylase family of proteins and are responsible for catalyzing the rate limiting step in the production of GABA ( $\gamma$ -aminobutyric acid) from L-glutamic acid. Although both GADs are found in the brain, GAD-65 localizes to synaptic vesicle membranes in nerve terminals, while GAD-67 is distributed throughout the cell. GAD-67 is responsible for the basal levels of GABA synthesis. In the case of a heightened demand for GABA in neurotransmission, GAD-65 will transiently activate to assist in GABA production. The loss of GAD-65 is detrimental and can impair GABA neurotransmission, however the loss of GAD-67 is lethal. Due to alternative splicing, two isoforms exist for GAD-67: the predominant GAD-67 form and the minor GAD-25 form.

**Synonyms:**

Glutamate decarboxylase 1, GAD-67

**Product images:**


Western blot (WB) analysis of GAD67 antibody at 1/500 dilution Lane 1:A549 cell lysate Lane 2:SP2/0 cell lysate Lane 3:PC12 cell lysate Lane 4:MCF-7 cell lysate



Immunohistochemistry analysis of GAD67 antibody in paraffin-embedded human brain tissue.