

## Product datasheet for **AP21181PU-N**

### Glutamate receptor ionotropic, NMDA 2D (GRIN2D) Rabbit Polyclonal Antibody

#### Product data:

|                         |  |
|-------------------------|--|
| Product Type:           | Primary Antibodies   |
| Applications:           | WB   |
| Recommended Dilution:   | <b>Western blot:</b> 1/500-1/1000.   |
| Reactivity:             | Human, Mouse, Rat  |
| Host:                   | Rabbit   |
| Clonality:              | Polyclonal   |
| Specificity:            | This antibody detects endogenous levels of NMDA $\epsilon$ 4 protein. (region surrounding Pro706)  |
| Formulation:            | Phosphate buffered saline (PBS), pH~7.2<br>State: Aff - Purified<br>State: Liquid purified Ig fraction (> 95% pure by SDS-PAGE).<br>Preservative: 0.05% Sodium Azide |
| Concentration:          | 1.0 mg/ml  |
| Purification:           | Affinity Chromatography using epitope-specific immunogen.  |
| 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: | ~170 kDa   |
| Gene Name:              | glutamate ionotropic receptor NMDA type subunit 2D   |
| Database Link:          | <a href="#">Entrez Gene 14814 Mouse</a> <a href="#">Entrez Gene 24412 Rat</a> <a href="#">Entrez Gene 2906 Human</a><br><a href="#">O15399</a>                       |



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**Background:**

Glutamate receptors mediate most excitatory neurotransmission in the brain and play an important role in neural plasticity, neural development and neurodegeneration. Ionotropic glutamate receptors are categorized into NMDA receptors and kainate/AMPA receptors, both of which contain glutamate-gated, calcium-specific ion channels. Kainate/AMPA receptors are co-localized with NMDA receptors in many synapses and consist of seven structurally related subunits designated GluR-1 to -7. The kainate/AMPA receptors are primarily responsible for the fast excitatory neurotransmission by glutamate whereas the NMDA receptors are functionally characterized by a slow kinetic and a high permeability for Ca<sup>2+</sup> ions. The NMDA receptors consist of five subunits: epsilon 1, 2, 3, 4 and one zeta subunit. The zeta subunit is expressed throughout the brainstem, whereas the four epsilon subunits display limited distribution.

**Synonyms:**

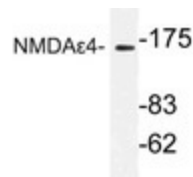
NR2D, GRIN2D, NMDAR2D

**Protein Families:**

Druggable Genome, Ion Channels: Glutamate Receptors, Transmembrane

**Protein Pathways:**

Alzheimer's disease, Amyotrophic lateral sclerosis (ALS), Calcium signaling pathway, Long-term potentiation, Neuroactive ligand-receptor interaction

**Product images:**

Western blot (WB) analysis of NMDAε4 antibody (Cat.-No.: AP21181PU-N) in extracts from COS-7 cells.