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# ProductInformation

**ANTI-GLUTAMATE RECEPTOR AMPA R2/3 (GluR2/3)**
Developed in Rabbit, Affinity Isolated Antibody

Product Number **G 5665**

## Product Description

Anti-Glutamate Receptor AMPA R2/3 (GluR2/3) is developed in rabbit using a synthetic peptide (EGYNVYGIESVKI) corresponding to the C-terminal of rat GluR2 as immunogen. This sequence differs in sequence from the corresponding region of GluR3 by only one amino acid.

Anti-Glutamate Receptor AMPA R2/3 (GluR2/3) reacts equally with GluR2 and GluR3. By immunoblotting of rat brain tissue homogenates, the antibody stains a single band co-migrating with GluR2 and GluR3 at approximately 105-107 kDa. The antibody reacts with human, mouse, rat and feline GluR2/3. Anti-GluR2/3 can be used for immunoblotting, immunocytochemistry, immunohistochemistry and immunoprecipitation.

Glutamate is the major excitatory neurotransmitter in the central nervous system.[1] Precise regulation of glutamate levels are necessary as excess glutamate is toxic to neurons, presumably through receptor activation which leads to elevated intracellular $Ca^{2+}$ levels.[2] Multiple glutamate receptors have been identified in the mammalian brain, including the ligand-gated ion channels (ionotropic glutamate receptors) which are permeable to cations. These receptors have been classified into multiple subtypes based upon pharmacological and electrophysiological data, and includes the alpha-amino-3-hydroxy-5-methyl-4-isoaxole propionate (AMPA)/kainate and N-methyl-D asparate (NMDA) receptors. The ligand-gated glutamate receptors are multimeric heteromers composed of distinct subunits. Another subfamily of glutamate receptors includes eight G protein-coupled metabotropic glutamate receptors.[3] The delta receptors are believed to represent another class of ionotropic glutamate receptors, although glutamate binding and ion channel activity remain to be demonstrated.[4] Glutamate receptors likely play a key role in learning and memory[5-7] and it has been proposed that several neurodegenerative diseases may involve neural cell death caused by excessive activation of the glutamate receptors.[8-10]

## Components

Anti-Glutamate Receptor AMPA R2/3 (GluR2/3) is supplied as affinity isolated antibody, lyophilized from phosphate buffered saline containing bovine serum albumin.

## Preparation Instructions

Reconstitute each vial (50 µg) with 0.5 ml sterile distilled water. The resulting solution will contain 0.1 mg/ml antibody in phosphate buffered saline, containing 1% bovine serum albumin.

## Storage/Stability

Store lyophilized product at –20 °C. Store reconstituted antibody at –20 °C for 6 months. Avoid repeated freeze/thaw cycles. Undiluted stock antibody solution containing 0.1% sodium azide can be stored at 4 °C for several weeks.

## Product Profile

The recommended concentration is 0.15-0.5 µg/ml for immunoblotting, 1-3 µg/ml for immunocytochemistry (light and EM) and 1-3 µg/ml Immunohistochemistry.

The recommended concentration for immunoprecipitation is 1-10 µg, coupled to immobilized Protein A or Protein G, will immunoprecipitate detergent solubilized GluR2/3 from brain or transfected cells.[11-14]

Note: In order to obtain best results and assay sensitivities of different techniques and preparations, we recommend determining optimal working dilution by titration test.

## References

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