

PRODUCT INFORMATION

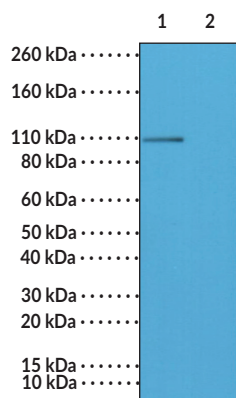


GluR1 (Phospho-Ser⁸⁴⁵) Rabbit Monoclonal Antibody (Clone RM296) Item No. 32242

Overview and Properties

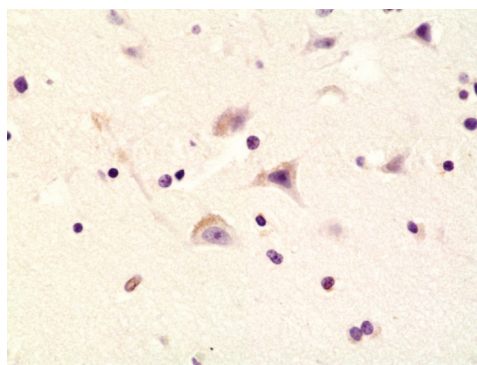
Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	AMPA-selective Glutamate Receptor 1, GluA1, GluR-1, GluR-A
Immunogen:	Peptide corresponding to human GluR1 (phospho-Ser ⁸⁴⁵)
Cross Reactivity:	(+) GluR1 (phospho-Ser ⁸⁴⁵); (-) GluR1 without phosphorylation at Ser ⁸⁴⁵
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM296
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:500-1:1,000 for IHC and 1:1,000-1:2,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: Mouse brain tissue lysate untreated
Lane 2: Mouse brain tissue lysate dephosphorylated

WB of mouse brain tissue lysates untreated or dephosphorylated with lambda protein phosphatase (λPP) using GluR1 (Phospho-Ser⁸⁴⁵) Rabbit Monoclonal Antibody (Clone RM296) at a dilution of 1:200.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human brain tissue using GluR1 (Phospho-Ser⁸⁴⁵) Rabbit Monoclonal Antibody (Clone RM296) at a 1:200 dilution.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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Description

GluR1 is a subunit of the AMPA ionotropic glutamate receptor, which is responsible for fast excitatory synaptic transmission in the CNS.¹ AMPA receptors are composed of four subunits, GluR1, GluR2, GluR3, and GluR4, which combine into heterotetramers to form a cation-permeable pore in the plasma membrane. Each subunit has two isoforms with the primary isoform designated as flip and a second isoform generated through alternative splicing designated as flop.^{2,3} The GluR1 flip and flop isoforms do not affect desensitization or channel opening and closing kinetics.³ GluR1 can be phosphorylated by PKA at serine 845 (Ser⁸⁴⁵), which increases the peak open probability of the ion channel, and dephosphorylation is required for AMPA receptor endocytosis.¹ GluR1 (phospho-Ser⁸⁴⁵) levels increase in the ventromedial prefrontal cortex (vmPFC) and nucleus accumbens (NAc) following cocaine-cue extinction.⁴ Levels of GluR1 (phospho-Ser⁸⁴⁵) are reduced following NMDA receptor activation in rat hippocampal slices and by amyloid- β (A β) oligomers in primary mouse neurons.^{5,6} Cayman's GluR1 (Phospho-Ser⁸⁴⁵) Rabbit Monoclonal Antibody (Clone RM296) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

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