

Product datasheet

Mouse NMDAR1 ELISA Kit ab282862

Recombinant SimpleStep ELISA®

[5 Images](#)

Overview

Product name Mouse NMDAR1 ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Extract	8			2.9%

Inter-assay

Sample	n	Mean	SD	CV%
Extract	3			3.8%

Sample type

Cell Lysate

Assay type

Sandwich (quantitative)

Sensitivity

27.74 pg/ml

Range

203.13 pg/ml - 13000 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Cell Lysate	92	80% - 100%

Assay time

1h 30m

Assay duration

One step assay

Species reactivity

Reacts with: Mouse

Product overview

Mouse NMDAR1 ELISA kit (ab282862) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Mouse NMDAR1 protein in mouse cell and tissue extract samples. It uses our proprietary SimpleStep ELISA® technology. Quantitate Mouse NMDAR1 with 27.74 pg/mL sensitivity.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is

recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate ([ab203359](#)) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.

Notes

Mouse NMDA receptor (NMDAR1) is a **glutamate** and **ion channel** protein receptor activated upon **glycine** and glutamate binding. NMDAR1 is a component of NMDA receptor complexes that function as heterotetrameric, ligand-gated ion channels with high calcium permeability and voltage-dependent sensitivity to magnesium. NMDA receptor complex channel activation requires binding of the neurotransmitter glutamate to the epsilon subunit, glycine binding to the zeta subunit, plus membrane depolarization to eliminate channel inhibition. Mouse NMDAR1 shares 99.8% and 99.3% sequence homology with rat and human, respectively.

Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.

It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

Platform

Pre-coated microplate (12 x 8 well strips)

Properties

Storage instructions Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Mouse NMDAR1 Capture Antibody	1 x 600µl
10X Mouse NMDAR1 Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml
Antibody Diluent 5BR	1 x 6ml
Mouse NMDAR1 Lyophilized Recombinant Protein	2 vials
Plate Seal	1 unit
Sample Diluent NS (ab193972)	1 x 12ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit

Components	1 x 96 tests
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

Function NMDA receptor subtype of glutamate-gated ion channels with high calcium permeability and voltage-dependent sensitivity to magnesium. Mediated by glycine. This protein plays a key role in synaptic plasticity, synaptogenesis, excitotoxicity, memory acquisition and learning. It mediates neuronal functions in glutamate neurotransmission. Is involved in the cell surface targeting of NMDA receptors.

Sequence similarities Belongs to the glutamate-gated ion channel (TC 1.A.10.1) family. NR1/GRIN1 subfamily.

Post-translational modifications NMDA is probably regulated by C-terminal phosphorylation of an isoform of NR1 by PKC. Dephosphorylated on Ser-897 probably by protein phosphatase 2A (PPP2CB). Its phosphorylated state is influenced by the formation of the NMDAR-PPP2CB complex and the NMDAR channel activity.

Cellular localization Cell membrane. Cell junction > synapse > postsynaptic cell membrane. Cell junction > synapse > postsynaptic cell membrane > postsynaptic density. Enriched in post-synaptic plasma membrane and post-synaptic densities.

Images

Powered by recombinant antibodies

Research with confidence
Consistent and reproducible results

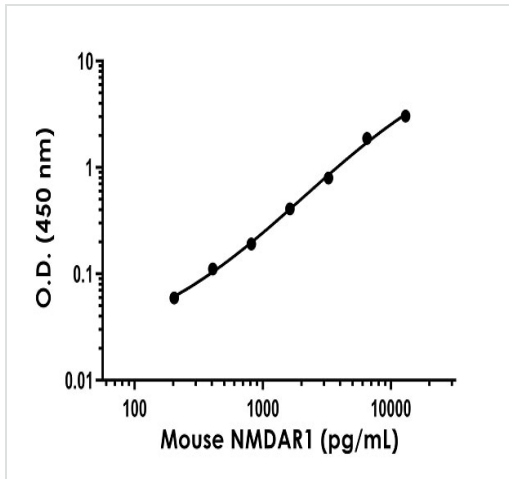
Long-term and scalable supply
Recombinant technology

Success from the first experiment
Confirmed specificity

Ethical standards compliant
Animal-free production

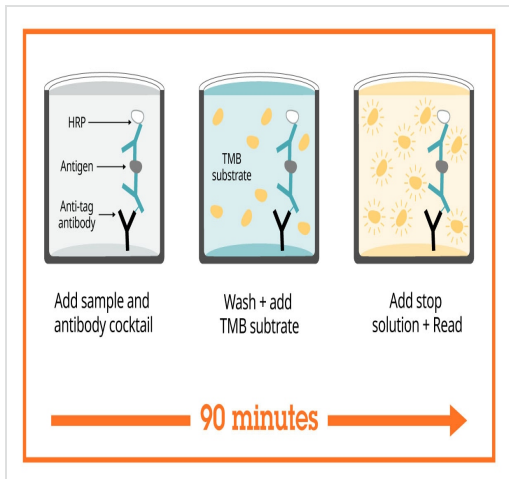
Recombinant Antibody Benefits

To learn more about the advantages of recombinant antibodies see [here](#).



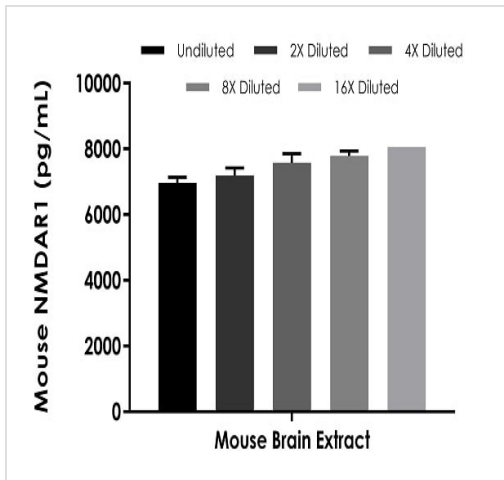
The NMDAR1 standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.

Example of mouse NMDAR1 standard curve in 1X Cell Extraction Buffer PTR.



SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.





Sandwich ELISA - Mouse NMDAR1 ELISA Kit (ab282862)



Interpolated concentrations of native NMDAR1 in mouse brain tissue extract based on a 125 µg/mL extract load.

The concentrations of NMDAR1 were measured in duplicate and interpolated from the NMDAR1 standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean NMDAR1 concentration was determined to be 7515.05 pg/mL in brain tissue extract.

Get more done with SimpleStep ELISA

- 
Easy to use
 Single-wash 90-minute protocol
- 
Flexible
 Matched antibody pairs available
- 
Precision antibodies
 High sensitivity, specificity and reproducibility
- 
Scalable
 Now in 10-pack and 384-well formats

Sandwich ELISA - Mouse NMDAR1 ELISA Kit
(ab282862)

To learn more about the advantages of SimpleStep ELISA® kits see [here](#).

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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