

# NR3A (Y-20): sc-51162

## BACKGROUND

NR3A is a subunit of the N-methyl-D-aspartate (NMDA) receptors, which belong to the superfamily of glutamate-regulated ion channels and function in pathological and physiological processes in the central nervous system. NR3A is a multi-pass membrane protein that is expressed in fetal brain and is mediated by glycine. It may be involved in the development of dendritic spines and in the PPP2CB-NMDAR mediated signaling mechanism. NR3A forms a heteromeric channel composed of a  $\zeta$  subunit (GRIN1), an  $\epsilon$  subunit (GRIN2A, GRIN2B, GRIN2C or GRIN2D) and a third subunit (GRIN3A or GRIN3B). The NR3A protein is enriched in post-synaptic plasma membrane and post-synaptic densities and requires the presence of GRIN1 to be targeted at the plasma membrane. The NR3A subunit displays greater than 90% sequence homology to the corresponding subunit in rat.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: GRIN3A (human) mapping to 9q31.1; Grin3a (mouse) mapping to 4 B1.

## SOURCE

NR3A (Y-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of NR3A of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-51162 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

NR3A (Y-20) is recommended for detection of NR3A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NR3A (Y-20) is also recommended for detection of NR3A in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for NR3A siRNA (h): sc-61229, NR3A siRNA (m): sc-61230, NR3A shRNA Plasmid (h): sc-61229-SH, NR3A shRNA Plasmid (m): sc-61230-SH, NR3A shRNA (h) Lentiviral Particles: sc-61229-V and NR3A shRNA (m) Lentiviral Particles: sc-61230-V.

Molecular Weight of NR3A: 135 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.