

# PRR7 (D-14): sc-169040

## BACKGROUND

PRR7 (proline rich 7), also known as Synaptic proline-rich membrane protein, is a 269 amino acid protein expressed in postsynaptic density (PSD) of the forebrain, especially in hippocampus. The proline rich sequence for which the protein is named is characteristic of a region that is involved in protein-protein interactions, acting as a ligand for SH3, WW and EVH1 domains. As a single-pass type III membrane protein, evidence shows that PRR7 forms a postsynaptic membrane complex with PSD-95 and NMDA $\alpha$ 1, suggesting its possible function in the modulation of neural activities. The expression pattern in brain also suggests that PRR7 is essential for synaptic formation or maturation, specifically in the cerebrum. Two isoforms of PRR7 exist as a result of an alternative splicing event.

## REFERENCES

1. Williamson, M.P. 1994. The structure and function of proline-rich regions in proteins. *Biochem. J.* 297: 249-260.
2. Kay, B.K., Williamson, M.P. and Sudol, M. 2000. The importance of being proline: the interaction of proline-rich motifs in signaling proteins with their cognate domains. *FASEB J.* 14: 231-241.
3. Lim, I.A., Merrill, M.A., Chen, Y. and Hell, J.W. 2003. Disruption of the NMDA receptor-PSD-95 interaction in hippocampal neurons with no obvious physiological short-term effect. *Neuropharmacology* 45: 738-754.
4. Murata, Y., Doi, T., Taniguchi, H. and Fujiyoshi, Y. 2005. Proteomic analysis revealed a novel synaptic proline-rich membrane protein (PRR7) associated with PSD-95 and NMDA receptor. *Biochem. Biophys. Res. Commun.* 327: 183-191.

## CHROMOSOMAL LOCATION

Genetic locus: PRR7 (human) mapping to 5q35.3; Prr7 (mouse) mapping to 13 B1.

## SOURCE

PRR7 (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of PRR7 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-169040 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## PROTOCOLS

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

## APPLICATIONS

PRR7 (D-14) is recommended for detection of PRR7 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); non cross-reactive with other PRR family members.

PRR7 (D-14) is also recommended for detection of PRR7 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for PRR7 siRNA (h): sc-91906, PRR7 siRNA (m): sc-152514, PRR7 shRNA Plasmid (h): sc-91906-SH, PRR7 shRNA Plasmid (m): sc-152514-SH, PRR7 shRNA (h) Lentiviral Particles: sc-91906-V and PRR7 shRNA (m) Lentiviral Particles: sc-152514-V.

## 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.

## RESEARCH USE

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