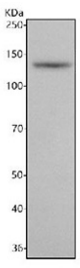
NRCAM Antibody / Neuronal cell adhesion molecule [clone ACOH-14] (RQ8949)

Catalog No.	Formulation	Size
RQ8949	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-2 weeks
Species Reactivity	Human, Rat
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	ACOH-14
Purity	Affinity purified
UniProt	Q92823
Applications	Western Blot : 1:500
Limitations	This NRCAM antibody is available for research use only.



Western blot testing of rat brain tissue lysate with NRCAM antibody. Predicted molecular weight ~144 kDa.

Description

NRCAM antibody is a valuable reagent for studying neural development, cell adhesion, and axonal guidance. The encoded protein, neuronal cell adhesion molecule (NRCAM), is a member of the immunoglobulin superfamily of cell adhesion molecules. NRCAM is primarily expressed in the nervous system, where it mediates interactions between neurons and glial cells. By promoting cell-cell adhesion, axon pathfinding, and synapse formation, NRCAM plays a fundamental role in establishing and maintaining neural circuits.

During development, NRCAM contributes to neurite outgrowth and guidance by interacting with other adhesion molecules, extracellular matrix proteins, and cytoskeletal regulators. It facilitates the migration of neurons and the fasciculation of axons, ensuring proper connectivity in the developing brain and spinal cord. In mature neurons, NRCAM continues to support synaptic plasticity and neuronal communication, making it critical for both development and functional maintenance of the nervous system.

Research has linked NRCAM to multiple human diseases. Genetic studies suggest associations with autism spectrum disorders, schizophrenia, and attention deficit hyperactivity disorder, where altered cell adhesion and synaptic signaling may contribute to pathogenesis. NRCAM expression has also been implicated in cancer biology, particularly in melanoma and neuroblastoma, where it may promote tumor cell adhesion, migration, and metastasis. These findings highlight NRCAM as a multifunctional protein relevant to both neuroscience and oncology.

At the molecular level, neuronal cell adhesion molecule contains six immunoglobulin-like domains and five fibronectin type III repeats, followed by a single transmembrane region and a cytoplasmic tail. This structure enables NRCAM to form homophilic and heterophilic interactions that regulate adhesion and signaling. Through links to the actin cytoskeleton and intracellular kinases, NRCAM modulates cellular morphology, motility, and signaling responses.

The NRCAM antibody is widely used in western blotting, immunohistochemistry, immunofluorescence, and flow cytometry to detect protein expression and localization. These applications are essential for mapping NRCAM distribution in developing and mature tissues, as well as examining its role in disease states. For researchers focused on neural connectivity, synapse biology, or tumor cell behavior, the NRCAM antibody provides a reliable detection tool. NSJ Bioreagents offers validated antibodies that deliver reproducibility and precision in advanced molecular studies.

Application Notes

Optimal dilution of the NRCAM antibody should be determined by the researcher.

Immunogen

A synthetic peptide specific to Neuronal cell adhesion molecule protein was used as the immunogen for the NRCAM antibody.

Storage

Store the NRCAM antibody at -20oC.