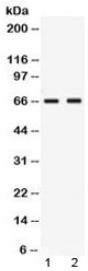
Nectin-4 Antibody / PVRL4 (R32559)

Catalog No.	Formulation	Size
R32559	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
UniProt	Q96NY8
Applications	Western Blot : 0.5-1ug/ml
Limitations	This Nectin-4 antibody is available for research use only.



Western blot testing of human 1) MCF7 and 2) MM453 lysate with Nectin-4 antibody at 0.5ug/ml. Expected molecular weight ~55 kDa (unmodified), ~66 kDa (glycosylated).

Description

Nectin-4 antibody detects NECTIN4/Nectin cell adhesion molecule 4, also called PVRL4, a cell adhesion protein belonging to the nectin family of immunoglobulin-like molecules that orchestrate the formation, maintenance, and remodeling of epithelial cell junctions. The UniProt recommended name is Nectin-4. As a core component of adherens junctions, Nectin-4 supports structural cohesion, coordinated cell movement, and proper tissue organization across diverse epithelial systems. Its activity influences development, morphogenesis, wound healing, and cellular communication in both embryonic and mature tissues.

Nectin-4 is a type I transmembrane protein consisting of an extracellular region with three immunoglobulin-like domains, a single-pass transmembrane helix, and a short cytoplasmic tail that interacts with intracellular scaffolding proteins involved in cytoskeletal organization. This molecular structure enables Nectin-4 to form both homophilic and heterophilic interactions at cellÃ¢Â€Â“cell interfaces. These adhesion activities work together with cadherins, afadin, and actin regulatory proteins to shape epithelial architecture, stabilize junctions, and support dynamic tissue remodeling during growth and regeneration.

The PVRL4 gene, located on chromosome 1q23.3, shows strong expression during embryonic development in epithelial and secretory tissues, including skin, lung, mammary gland, and gastrointestinal epithelium. In adults, its expression becomes more restricted but remains inducible in response to proliferative stimuli, inflammatory signals, or tissue repair processes. This regulated expression pattern underscores the protein's role as a marker of epithelial integrity and morphogenetic status.

Nectin-4 participates in multiple biological pathways related to adhesion, polarity establishment, and coordinated cell movement. At developing epithelial junctions, Nectin-4 helps recruit cytoplasmic partners that modulate small GTPase activity, influencing cytoskeletal rearrangement and junctional stability. Through these interactions, Nectin-4 contributes to shaping cell shape transitions, guiding collective migration, and maintaining tissue boundaries. During wound repair or barrier restoration, Nectin-4 supports rearrangement of adhesive contacts to reestablish functional epithelial layers.

Because of its surface localization and regulatory functions, Nectin-4 has become an important research focus in oncology. Numerous studies have reported elevated Nectin-4 expression in malignancies such as breast, lung, pancreatic, ovarian, urothelial, and head and neck cancers. Increased expression is often associated with altered adhesion dynamics, enhanced motility, epithelial to mesenchymal transition, and aggressive tumor behavior. Nectin-4 contributes to microenvironment remodeling, collective invasion, and changes in cell-cell cohesion that facilitate metastasis. Its selective expression in tumors compared with most healthy adult tissues has also made it a valuable diagnostic marker and a target for therapeutic antibody development.

In addition to its roles in epithelial biology and cancer, Nectin-4 is also known for its involvement in viral entry mechanisms. It serves as a receptor for measles virus, and its distribution in epithelial tissues has shed light on viral tropism and infection pathways. This aspect of Nectin-4 biology has increased interest in its regulation during both health and disease, particularly in studies investigating epithelial susceptibility and hostÃ¢Â€Â“pathogen interactions.

Nectin-4 is also relevant to developmental biology. During embryogenesis, its coordinated expression with other nectins and cadherins supports morphogenetic movements, proper layering of epithelial structures, and stabilization of tissue patterns. Its cytoplasmic interactions influence polarity cues that help determine apicalÃ¢Â€Â“basal organization, a fundamental feature of mature epithelia. Nectin-4 further contributes to tissue mechanical properties by modulating cell adhesion strength and cytoskeletal tension, supporting long term tissue integrity.

Research into Nectin-4 has expanded substantially as interest grows in epithelial remodeling, cancer progression, cell junction biology, and viral receptor function. Because Nectin-4 integrates signaling, adhesion, and structural regulation, it remains a key molecular target in studies exploring how epithelial tissues adapt to injury, undergo transformation, or respond to external stressors.

Nectin-4 antibody is validated for use in relevant research applications to examine PVRL4 protein expression and study epithelial adhesion, junctional remodeling, and cancer associated regulatory pathways. NSJ Bioreagents provides Nectin-4 antibody reagents suitable for investigations in developmental biology, oncology, virology, and epithelial tissue research.

Application Notes

Differences in protocols and secondary/substrate sensitivity may require the Nectin-4 antibody to be titrated for optimal performance.

Immunogen

Amino acids 53-94 (FYRGDSGEQVGQVAWARVDAGEGAQELALLHSKYGLHVSPAY) from the human protein were used as the immunogen for the Nectin-4 antibody.

Storage

After reconstitution, the Nectin-4 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.