Human Nectin-3 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF3064

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Nectin-3 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 65% cross-reactivity with recombinant mouse Nectin-3 and less than 5% cross-reactivity with recombinant human Nectin-1, -2, and -4 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Nectin-3 Leu56-Asp400 Accession # Q9NQS3
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

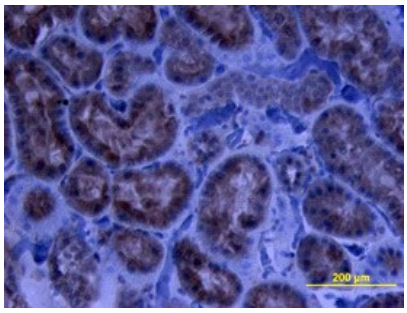
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human Nectin-3 (Catalog # 3064-N3)
Flow Cytometry	2.5 µg/10^6 cells	HepG2 human hepatocellular carcinoma cell line
Immunohistochemistry	5-15 µg/mL	See Below

DATA

Immunohistochemistry



Nectin-3 in Human Kidney Array. Nectin-3 was detected in immersion fixed paraffin-embedded sections of human kidney array using Goat Anti-Human Nectin-3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3064) at 10 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Nectins are a small family of Ca^{++}-independent immunoglobulin (Ig)-like cell adhesion molecules (CAMs) that organize intercellular junctions (1-4). The Nectin family has at least four members (Nectin-1-4), all of which show alternate splicing, a transmembrane (TM) region (except for Nectin-1γ), and three extracellular Ig-domains. Nectins are highly homologous to the human receptor for poliovirus, and as such, have been alternatively-named poliovirus receptor-related proteins. They do not, however, appear to bind poliovirus (1). Nectin-3 (also named PRR3, CD113, and PVRL3) is an 83 kDa, type I TM glycoprotein. Its precursor is 549 amino acids (aa) in length. It contains an extended signal sequence of 57 aa, an extracellular domain (ECD) of 347 aa, a transmembrane segment of 21 aa (aa 405-425), and a cytoplasmic region of 124 amino acids. The ECD shows three Ig-like domains; one N-terminal V-type and two membrane-proximal C2-type. The cytoplasmic region shows a Glu-Trp-Tyr-Val motif that binds afadin (3, 5, 6). The ECD of human Nectin-3 is 94% aa identical to mouse Nectin-3 ECD (5, 6). Nectin-3 has a diverse expression pattern. It has been found in junctions between small intestinal columnar epithelial cells (6), pigmented and nonpigmented epithelium in the ciliary body (7), spermatids and Sertoli cells in the seminiferous tubules (8), and on spinal cord motor neurons and axons, plus Schwann cells of the peripheral nervous system (9). As with mouse, human Nectin-3 has three potential isoforms. It does not appear that they are strict orthologs. In addition to the full length isoform, a second human isoform has a 31 aa substitution for the first 54 aa of the signal sequence, followed by a deletion of aa 291-549 (10). The third human isoform shows a 10 aa substitution for aa 357-549 (11). Nectin-3 is proposed to promote cell adhesion by initiating cell-to-cell adhesion, allowing for subsequent JAM and cadherin-based intercellular junction formation. It does so by first forming same cell (*cis*-) heterodimers with $\alpha_v\beta_3$ and PDGF R (an anti-apoptotic interaction) (2, 4). This results in actin reorganization and recruitment of adherens and occludins adhesion molecules. Subsequent Nectin-3 activity adds strength to the junction through trans-interactions with a variety of molecules, including Nectin-3 itself, as well as Nectins-1 and 2 plus Necl-1, 2 and 5 (3, 4).

References:

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