Recombinant Rat Nectin-4 His-tag

Catalog Number: 9997-N4

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived rat Nectin-4 protein Tyr28-Val348, with a C-terminal 6-His tag Accession # NP_001102546.1
N-terminal Sequence Analysis	Tyr28
Predicted Molecular Mass	35 kDa

SPECIFICATIONS

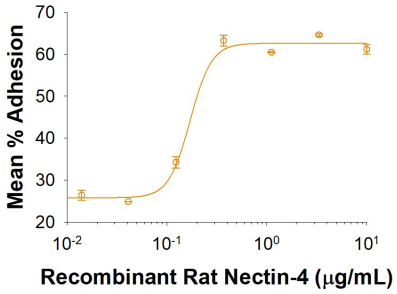
SDS-PAGE	38-48 kDa, reducing conditions
Activity	Measured by the ability of the immobilized protein to support the adhesion of NIH-3T3 mouse embryonic fibroblast cells. The ED_{50} for this effect is 0.1-0.8 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
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. • 3 months, ≤ -20 °C under sterile conditions after reconstitution.

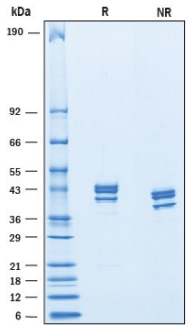
DATA

Bioactivity



Immobilized Recombinant Rat Nectin-4 (Catalog # 9997-N4) supports the adhesion of NIH-3T3 mouse embryonic fibroblast cells. The ED_{50} for this effect is 0.1-0.8 µg/mL.

SDS-PAGE



2 µg/lane of Recombinant Rat Nectin-4 was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 38-48 kDa.

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BACKGROUND

Nectin-4, also known as Poliovirus receptor-related protein 4 (Gene name: PVRL4), is a 66-kDa type I transmembrane glycoprotein belonging to the Nectin immunoglobulin superfamily (1). The Latin word *necto* means "to connect", indicating the role of nectins in Ca^{2+}-independent cell-cell adhesion (2). Nectin-4 forms homodimers in *cis*, followed by interactions in *trans* with Nectin-1 or -4 (1-3). Human Nectin-4 is normally expressed in the placenta, especially in endothelial cells, while in the mouse it is found in the embryo, lung, testis and brain (1, 4, 5). In many human ductal breast or non-small cell lung carcinomas, Nectin-4 is up-regulated and a soluble 43-kDa form is found in the plasma (4-6). This form is generated from the membrane protein via the action of TACE/ADAM-17 (6). Nectin extracellular domains (ECDs) contain three Ig-like domains: an N-terminal V-type that mediates ligand binding, and two C2-type (1, 3). Within the ECD, rat Nectin-4 shares 91%, and 97% amino acid sequence identity with human and mouse Nectin-4, respectively. In forming adherens junctions, *trans* interactions of Nectin-4 initiate cell-cell interactions and recruit intracellular cadherins through afadin and other junctional proteins (1, 2). These interactions organize the actin cytoskeleton, strengthen attachment to basement membrane and promote further cell-cell connections (2, 7). In humans, mutation of Nectin-4 has been correlated with ectodermal dysplasia-syndactyly syndrome, indicating a role for Nectin-4 in human development (7). High Nectin-4/PVRL4 expression was associated with poor-prognosis in some invasive breast cancers and may be a new promising prognostic biomarker and specific therapeutic target (8).

References:

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