

# PRODUCT INFORMATION



## Nectin-2 Extracellular Domain (mouse, recombinant)

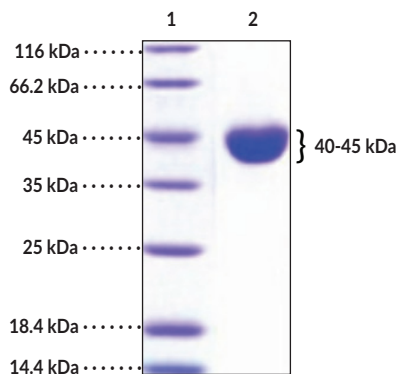
Item No. 32074

### Overview and Properties

<b>Synonyms:</b>	CD112, Herpesvirus Entry Mediator B, HveB, Nectin Cell Adhesion Molecule 2, Poliovirus Receptor-related Protein 2, PRR2
<b>Source:</b>	Active recombinant mouse C-terminal His-tagged nectin-2 expressed in HEK293 cells
<b>Amino Acids:</b>	32-351
<b>Uniprot No.:</b>	P32507
<b>Molecular Weight:</b>	36 kDa
<b>Storage:</b>	-80°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Purity:</b>	≥98% estimated by SDS-PAGE
<b>Supplied in:</b>	Lyophilized from sterile PBS, pH 7.4
<b>Endotoxin Testing:</b>	<1.0 EU/μg, determined by the LAL endotoxin assay
<b>Bioactivity:</b>	Measured by binding ability in binding assay 1. Immobilized Nectin-2 Extracellular Domain (mouse, recombinant) (Item No. 32074) at 10 μg/ml (100 μl/well) can bind CD226 Extracellular Domain (mouse, recombinant; His-tagged) (Item No. 32072) with a linear range of 0.156-5.0 μg/ml. 2. Immobilized Nectin-2 Extracellular Domain (mouse, recombinant) (Item No. 32074) at 10 μg/ml (100 μl/well) can bind CD226 Extracellular Domain (mouse, recombinant; His- and hFc-tagged) (Item No. 32071) with a linear range of 0.03-1.0 μg/ml.

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Image



Lane 1: MW Markers  
Lane 2: Nectin-2 Extracellular Domain

**SDS-PAGE Analysis of Nectin-2 Extracellular Domain.** This protein has a calculated molecular weight of 36 kDa. It has an apparent molecular weight of approximately 40-45 kDa by SDS-PAGE under reducing conditions due to glycosylation.

**WARNING**  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

**SAFETY DATA**  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

**WARRANTY AND LIMITATION OF REMEDY**  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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## Description

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Nectin-2, also known as CD112, is a member of the nectin family of adhesion molecules that mediates the formation of adherens junctions and regulates immune cell activation.<sup>1</sup> It contains an N-terminal extracellular domain with three immunoglobulin-like (Ig-like) loops, C1-like and C2 domains that mediate dimerization, a transmembrane segment, and a C-terminal cytoplasmic tail that binds to the actin filament-binding protein afadin.<sup>1,2</sup> Nectin-2 is expressed by a variety of cell types, including epithelial cells, neurons, fibroblasts, Sertoli cells, and cancer cells, and is upregulated by TGF- $\beta$ 1 (Item No. 30606) or IFN- $\beta$  stimulation.<sup>1-3</sup> It localizes to the cell surface where it forms *cis*-homodimers that associate by *trans*-interactions with *cis*-homodimers of other nectins and nectin-like molecules (Necls) expressed on adjacent cells, resulting in cell-cell adhesion.<sup>1,4</sup> Nectin-2 binds the co-stimulatory receptor CD226/DNAM-1, which is widely expressed by most immune cells, including T cells, B cells, natural killer (NK) cells, and monocytes, and the inhibitory receptors TIGIT and CD96, which are expressed by NK cells and T cells, thus regulating both the activation or inhibition of immune cells in a receptor-specific manner.<sup>1</sup> It is also the receptor for herpesvirus entry into cells. Sperm isolated from *Nectin2*<sup>-/-</sup> mice have decreased motility and maturation and fail to fuse with oocytes, resulting in male-specific infertility.<sup>5</sup> Neutralization of nectin-2 with a monoclonal antibody decreases tumor growth and reduces metastasis in OV-90 or MDA-MB-231 mouse xenograft models, respectively.<sup>2</sup> Cayman's Nectin-2 Extracellular Domain (mouse, recombinant) protein can be used for binding assay applications. This protein consists of 331 amino acids, has a calculated molecular weight of 36 kDa, and a predicted N-terminus of Gln32 after signal peptide cleavage. By SDS-PAGE, under reducing conditions, the apparent molecular mass of the protein is 40 to 45 kDa due to glycosylation.

## References

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1. Huang, K. and Lui, W.-Y. Nectins and nectin-like molecules (Necls): Recent findings and their role and regulation in spermatogenesis. *Semin. Cell Dev. Biol.* **59**, 54-61 (2016).
2. Oshima, T., Sato, S., Kato, J., *et al.* Nectin-2 is a potential target for antibody therapy of breast and ovarian cancers. *Mol. Cancer* **12**, 60 (2013).
3. Takai, Y., Irie, K., Shimizu, K., *et al.* Nectins and nectin-like molecules: Roles in cell adhesion, migration, and polarization. *Cancer Sci.* **94(8)**, 655-667 (2003).
4. Brlić, P.K., Roviš, T.L., Cinamon, G., *et al.* Targeting PVR (CD155) and its receptors in anti-tumor therapy. *Cell. Mol. Immunol.* **16(1)**, 40-52 (2019).
5. Ogita, H. and Takai, Y. Cross-talk among integrin, cadherin, and growth factor receptor: Roles of nectin and nectin-like molecule. *A Survey of Cell Biology*. Jeon, K.W., editor, *Academic Press* (2008).

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