

Mass

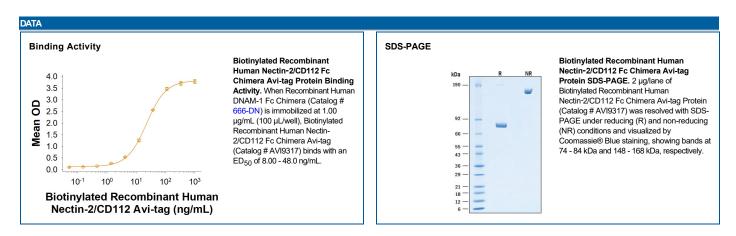
## Biotinylated Recombinant Human Nectin-2/CD112 Fc Chimera Avi-tag

Catalog Number: AVI9317

DESCRIPTION					
Source	Human embryonic kidney cell, HEK293-derived human Nectin-2/CD112 protein				
	Human Nectin-2/CD112 (Gln32-Leu360) Accession # NP_002847.1	IEGRMD	Human IgG <sub>1</sub> (Pro100-Lys330)	Avi-tag	
	N-terminus C-termin				
N-terminal Sequence Analysis	Gln32 inferred from enzymatic pyroglutamate treatment revealing Asp33.				
Structure / Form	Disulfide-linked homodimer				
Predicted Molecular	62 kDa				

SPECIFICATIONS		
SDS-PAGE	74-84 kDa, under reducing conditions.	
Activity	Measured by its binding ability in a functional ELISA.  When Recombinant Human DNAM-1 Fc Chimera (Catalog # 666-DN) is immobilized at 1.00 μg/mL (100 μL/well), Biotinylated Recombinant Human Nectin-2/CD112 Fc Chimera Avi-tag binds with an ED <sub>50</sub> of 8.00-48.0 ng/mL.	
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.	
Purity	>95%, by SDS-PAGE with silver staining, under reducing conditions.	
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. 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 to -70 °C under sterile conditions after reconstitution.		



Rev. 1/20/2022 Page 1 of 2





## Biotinylated Recombinant Human Nectin-2/CD112 Fc Chimera Avi-tag

Catalog Number: AVI9317

## BACKGROUND

Nectin-2, also known as Poliovirus receptor-related 2 (PRR2), is a member of the Nectin family which are Ca++-independent immunoglobulin (Ig)-like cell adhesion molecules (CAMs) that organize intercellular junctions (1). The Nectin family is comprised of 4 family members and 5 nectin-like molecules and they are structurally homologous to the poliovirus receptors (2). Mature human Nectin-2 consists of an extracellular domain (ECD) with three immunoglobulin-like domains, a single transmembrane segment, and a cytoplasmic domain bind the F-actin-binding protein afadin (3). Within the ECD, human Nectin-2 shares 72% amino acid (aa) sequence identity with mouse Nectin-2. Alter native splicing generates an isoform with a truncated cytoplasmic tail (1). Nectin-2 localizes to adherens junctions between neurons, endothelial cells, epithelial cells, and fibroblasts (3, 4). It forms homodimers in *cis*, followed by dimers in trans (between cells) (4). It does not *cis*-dimerize with other Nectins but forms *cis*-dimers between its two splice forms. Notably, a Nectin-2 *cis*-dimer on one cell can heterodimerize with a Nectin-3 *cis*-dimer on a neighboring cell (4). Nectin-2 additionally binds to DNAM-1/CD226 on NK cells and triggers NK cell cytolytic activity (5, 6). Nectin-2 is known to bind pseudorables virus and herpes simplex virus-2 (HSV-2), but not HSV-1 or poliovirus (4, 7). Nectin-2 is a component of cardiac intercalated discs and limits fibrosis and dysfunction resulting from pressure overload (8). Our Avi-tag Biotinylated Nectin-2 features biotinylation at a single site contained within the Avi-tag, a unique 15 amino acid peptide. Protein orientation will be uniform when bound to streptavidin-coated surface due to the precise control of biotinylation and the rest of the protein is unchanged so there is no interference in the protein's bioactivity.

## References:

- 1. Eberle, F. et al. (1995) Gene 159:267.
- 2. Samanta, D. and S.C. Almo (2015) Cell. Mol. Life Sci. 72:645.
- 3. Samanta, D. et al. (2012) PNAS 109:14836.
- 4. Struyf, F. et al. (2002) J. Virol. 76:12940.
- 5. Bottino, C. et al. (2003) J. Exp. Med. 198:557.
- 6. Pende, D. et al. (2005) Mol. Immunol. 42:463.
- 7. Warner, M.S. et al. (1998) Virology 246:179.
- 8. Satomi-Kobayashi, S. et al. (2009) Hypertension 54:825.