

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived cynomolgus monkey Nectin-2/CD112 protein		
	Cynomolgus Monkey (Gln32-Gly360) Accession # XP_005589607.1	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	No results obtained: Gln32 predicted		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	62 kDa		

SPECIFICATIONS

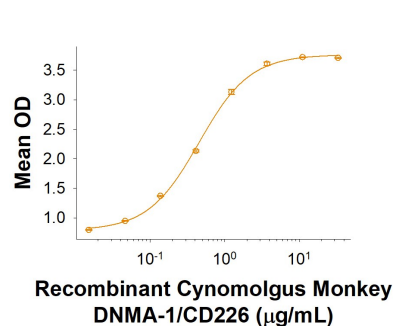
SDS-PAGE	68-80 kDa, under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Cynomolgus Monkey Nectin-2/CD112 Fc Chimera is immobilized at 1 µg/mL (100 µL/well), Recombinant Cynomolgus Monkey DNAM-1/CD226 Fc Chimera (Catalog # 9317-N2) binds with an ED ₅₀ of 0.1-0.6 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 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	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 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.

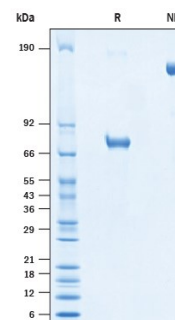
DATA

Binding Activity



When Recombinant Cynomolgus Monkey Nectin-2/CD112 Fc Chimera (Catalog # 10485-N2) is immobilized at 1 µg/mL (100 µL/well), Recombinant Cynomolgus Monkey DNAM-1/CD226 Fc Chimera (Catalog # 9276-DN) binds with an ED₅₀ of 0.1-0.6 µg/mL.

SDS-PAGE



2 µg/lane of Recombinant Cynomolgus Monkey Nectin-2/CD112 Fc Chimera Protein (Catalog # 10485-N2) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 68-80 kDa and 130-160 kDa, respectively.

BACKGROUND

Nectins are a small family of Ca⁺⁺-independent immunoglobulin (Ig)-like cell adhesion molecules (CAMs) that organize intercellular junctions (1). They are highly homologous to the human receptor for poliovirus, and as such have been alternately named poliovirus receptor-related proteins. Based on its similarity with human Nectin-2, cynomolgus Nectin-2/CD112 (Nectin-2δ) is predicted to consist of a 329 amino acid (aa) extracellular region (ECD) with three immunoglobulin-like domains, a 21 aa transmembrane segment, and a 157 aa cytoplasmic domain (2). Within the ECD, cynomolgus Nectin-2 shares 96% aa sequence identity with human Nectin-2. Alternative splicing of human Nectin-2 generates a short 60 kDa isoform with a 94 aa cytoplasmic tail (2). Nectin-2 localizes to adherens junctions between neurons, endothelial cells, epithelial cells, and fibroblasts (1, 3). It forms homodimers *in cis*, followed by dimers in trans (between cells) (3). 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 (3). Nectin-2 additionally binds to DNAM-1/CD226 on NK cells and triggers NK cell cytolytic activity (4, 5). Nectin-2 is known to bind pseudorabies virus and herpes simplex virus-2 (HSV-2), but not HSV-1 or poliovirus (3, 6). Nectin-2 is a component of cardiac intercalated discs and limits fibrosis and dysfunction resulting from pressure overload (7).

References:

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