

DESCRIPTION

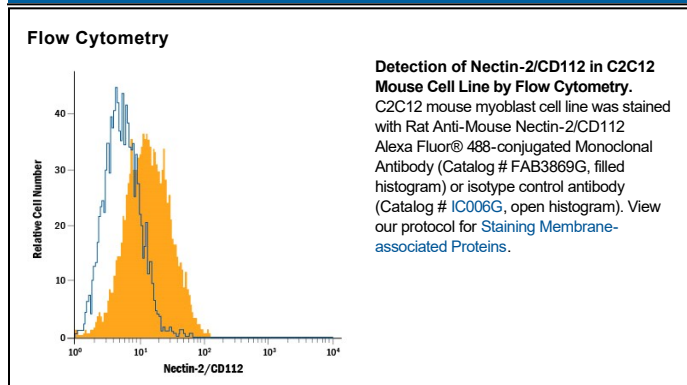
Species Reactivity	Mouse
Specificity	Detects mouse Nectin-2/CD112 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human Nectin-2/CD112 or recombinant mouse CD155/PVR is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 829038
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Nectin-2/CD112 Gln32-Gly351 (predicted) Accession # P32507
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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
Flow Cytometry	5 µL/10 ⁶ cells	See Below

DATA



PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Nectins are a small family of Ca⁺⁺-independent immunoglobulin (Ig)-like Cell Adhesion Molecules (CAMs) that control cell adhesion, proliferation, and migration (1, 2, 3). The name Nectin derives from the Latin word *necto*, which means "to connect". The Nectin family contains four members (Nectin-1 to -4), all of which show alternate splicing, a transmembrane (TM) region (except for Nectin-1γ which is secreted), and three extracellular Ig-domains. Nectins are highly homologous to the human receptor for poliovirus, and as such have been given the alternate name of poliovirus receptor-related proteins. They do not, however, appear to bind poliovirus (1). Mouse Nectin-2 is a 70 to 78 kDa type I TM glycoprotein that is found on a variety of cell types (4, 5). It has two splice forms (4, 6, 7). Nectin-2α/PRR2 is a 65 kDa short form and is synthesized as a 467 amino acid precursor. It contains a 31 aa signal sequence, a 315 aa extracellular domain (ECD), a 28 aa TM segment, and a 93 aa cytoplasmic region. The ECD contains one N-terminal V-type Ig domain and two 85-95 aa C2-type Ig-like domains (aa 153-337) (8). The V-domain is believed to mediate Nectin binding to its ligands (9). A long, 78 kDa, 530 aa isoform of mouse Nectin-2 (Nectin-2δ) also exists. It has the same signal sequence and extracellular domain as Nectin-2α (aa 1-338), but differs in the TM segment (21 aa in length) and cytoplasmic region (159 aa in length) (4, 6, 7). Mouse Nectin-2 ECD (aa 32-338) shares 72%, 77% and 95% aa identity with the ECD in human, canine and rat Nectin-2, respectively. Nectin-2 is known to bind pseudorabies virus, and Herpes Simplex Virus-2 (HSV-2). It also binds select HSV-1 strains. It does not bind poliovirus (1, 10, 11). As a cell adhesion molecule, Nectin-2 will form cis-homodimers (same cell) and trans-homodimers (across cells). Nectin-2 will not cis-dimerize with other Nectins, but will trans-heterodimerize with Nectin-3 and CD266/DNAM-1 (1, 3, 11, 12, 13). Nectin-2 is found concentrated at cell-to-cell interfaces, and is presumed to contribute to tight and adherens junction formation (14). Through its interaction with NK and T cell expressed DNAM-1, it also promotes lymphocyte cytotoxicity and cytokine secretion against both tumors and Dendritic Cells (DC) expressing Nectin-2 (15, 16). In the case of DC, this may be a mechanism whereby the immune system eliminates DC that are inefficient at antigen presentation. Nectin-2 is expressed on epithelium, endothelial cells, Sertoli cells, monocytes, dendritic cells, granulosa cells, mast cells, eosinophils and fibroblasts.

References:

1. Takai, Y. and H. Nakanishi (2003) *J. Cell Sci.* **116**:17.
2. Rikitake, Y. and Y. Takai (2008) *Cell. Mol. Life Sci.* **65**:253.
3. Sasisaka, T. *et al.* (2007) *Curr. Opin. Cell Biol.* **19**:1.
4. Aoki, J. *et al.* (1994) *J. Biol. Chem.* **269**:8431.
5. Takahashi, K. *et al.* (1999) *J. Cell Biol.* **145**:539.
6. Aoki, J. *et al.* (1997) *Exp. Cell Res.* **235**:374.
7. Lopez, M. *et al.* (1998) *Blood* **92**:4602.
8. Morrison, M.E. and V.R. Racaniello (1992) *J. Virol.* **66**:2807.
9. Struyf, F. *et al.* (2002) *J. Virol.* **76**:12940.
10. Delboy, M.G. *et al.* (2006) *Virology J.* **3**:105.
11. Irie, K. *et al.* (2004) *Semin. Cell Dev. Biol.* **15**:643.
12. Tahara-Hanaoka, S. *et al.* (2004) *Int. Immunol.* **16**:533.
13. Satoh-Horikawa, K. *et al.* (2000) *J. Biol. Chem.* **275**:10291.
14. Nakanishi, H. and Y. Takai (2004) *Biol. Chem.* **385**:885.
15. Tahara-Hanaoka, S. *et al.* (2006) *Blood* **107**:1491.
16. Pende, D. *et al.* (2006) *Blood* **107**:2030.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.