Human Nectin-1 Antibody

Monoclonal Mouse IgG_{2A} Clone # 610835

Catalog Number: MAB2880

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Nectin-1 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human Nectin-2, 3, 4, or recombinant mouse Nectin-1 is observed.
Source	Monoclonal Mouse IgG_{2A} Clone # 610835
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Nectin-1 Gln31-Thr334 Accession # Q15223
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

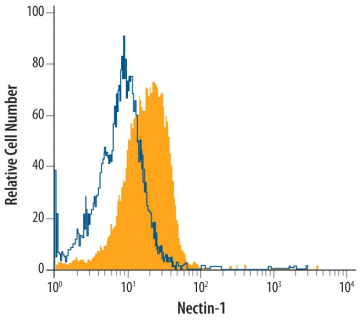
APPLICATIONS

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	2.5 µg/10^6 cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA

Flow Cytometry



Detection of Nectin-1 in U937 Human Cell Line by Flow Cytometry. U937 human histiocytic lymphoma cell line was stained with Human Nectin-1 Monoclonal Antibody (Catalog # MAB2880, filled histogram) or isotype control antibody (Catalog # MAB003, open histogram), followed by Allophycocyanin-conjugated Anti-Mouse IgG $F(ab')_2$ Secondary Antibody (Catalog # F0101B).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
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. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

Human Nectin-1 Antibody

Monoclonal Mouse IgG_{2A} Clone # 610835

Catalog Number: MAB2880

BACKGROUND

Nectin-1 (designated CD111), also called PRR-1 (poliovirus receptor-related protein 1) or HVEC (herpesvirus entry mediator C), is a widely expressed 110 kDa type I transmembrane glycoprotein important in formation of adherens junctions and synapses. It is a member of the nectin family within the Ig superfamily (1, 2). The Latin word *necto* means “to connect”, indicating the role of nectins in Ca^{2+}-independent cell-cell adhesion (2). Nectin-1 forms homodimers in *cis*, followed by interactions in *trans* with Nectin-1, -3 or -4 (2). The 517 amino acid (aa) human Nectin-1 isoform 1 contains a 30 aa signal sequence, a 325 aa extracellular domain (ECD), a 21 aa transmembrane segment (TM), and a 141 aa cytoplasmic region. Nectin ECDs contain three Ig-like domains: an N-terminal V-type that mediates ligand binding and two C2-type (3). Nectin-1, like other nectins, has a splice form (isoform 2 or HigR, 458 aa) with alternate TM and cytoplasmic sequences. Another, isoform 3, is a 352 aa secreted protein (4). The common region of mature human Nectin-1 (aa 31-334) shares 93%, 94%, 96% and 96% aa identity with mouse, rat, bovine and porcine Nectin-1, respectively. Nectin-1 binds viral glycoprotein D to mediate herpesvirus (but not poxvirus) entry into vaginal mucosa, sensory neurons and fibroblasts (4 - 7). In forming adherens junctions and synapses, nectins 1 and 3 initiate cell-cell interactions, recruiting $\alpha_v\beta_3$ integrin extracellularly and cadherins intracellularly through afadin and other junctional proteins (2, 8 - 11). These interactions organize the cytoskeleton, strengthen attachment to basement membrane and promote further cell-cell connections. Nectin-1 also recognizes CD96 on NK cells (12). Deficiency of Nectin-1 can result in cleft lip/palate ectodermal dysplasia (13). Nectin-1 downregulation in epithelial cancers, mediated in part by ectodomain shedding, may contribute to invasiveness (14).

References:

1. Lopez, M. *et al.* (1995) Gene **155**:261.
2. Takai, Y. *et al.* (2008) Nat. Rev. Mol. Cell Biol. **9**:603.
3. Fabre, S. *et al.* (2002) J. Biol. Chem. **277**:27006.
4. Lopez, M. *et al.* (2001) J. Virol. **75**:5684.
5. Cocchi, F. *et al.* (1998) Proc. Natl. Acad. Sci. USA **95**:15700.
6. Linehan, M. M. *et al.* (2004) J. Virol. **78**:2530.
7. Simpson, S. A. *et al.* (2005) J. Neurovirol. **11**:208.
8. Mizoguchi, A. et al. (2002) J. Cell Biol. **156**:555.
9. Togashi, H. *et al.* (2006) J. Cell Biol. **174**:141.
10. Tachibana, K. *et al.* (2000) J. Cell Biol. **150**:1161.
11. Takai, Y. and H. Nakanishi (2003) J. Cell Science **116**:17.
12. Seth, S. *et al.* (2007) Biochem. Biophys. Res. Commun. **364**:959.
13. Suzuki, K. *et al.* (2000) Nat. Genet. **25**:427.
14. Tanaka, Y. *et al.* (2002) Biochem. Biophys. Res. Commun. **299**:472.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956