

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	Nectin-3, Mouse, clone 103-A1		
Catalog number	HM1053-100UG		
Lot number	-	Expiry date	-
Volume	1 ml	Amount	100 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA	Concentration	100 µg/ml
Host Species	Rat IgG2a	Conjugate	None
Endotoxin	<24 EU/mg	Purification	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #	2-7		1-7					3
Yes	•		•	•	•	•		
No								•
N.D.		•					•	

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

- IF: fixed in 2% paraformaldehyde in PBS optionally followed by methanol/acetone fixation (Ref 2-7).
- FC: 1 µg per 1 x 10⁶ cells.
- FS: injection of 1 µg into lumen of seminiferous tubules.
- IA: Indirect ELISA on 0.5 µg/ml mouse nectin-3 coated per well. Positive signal with 2 µg/ml antibody.
- IF: Cells are fixed in 2% paraformaldehyde in PBS, optionally followed by methanol/acetone fixation (Ref 1-6).: proteins were separated by SDS-PAGE and electrophoretically transferred onto polyvinylidene fluoride sheets, which were then incubated with primary antibodies. Binding was detected with HRP-conjugated secondary antibodies and Western blotting detection reagents (Ref.3).
- Positive control: L-cells (A cultured line of C3H mouse fibroblasts); Negative control: Cells/tissues derived from nectin-3 knockout mouse (Ref 5).

General Information

Description The monoclonal antibody 103-A1 recognizes mouse nectin-3. Nectin-3 is a 83 kDa type I transmembrane glycoprotein. Nectin, originally isolated as poliovirus receptor-related protein (PRR), is a cell-cell adhesion molecule of the immunoglobulin supergene family. Nectins are calcium-independent immunoglobulin-like cell-cell adhesion molecules consisting of four members, nectin 1-4. Nectins homophilically and heterophilically trans-interact to form a variety of cell-cell junctions, including cadherin-based adherens junctions in epithelial cells and fibroblasts in culture, synaptic junctions in neurons, and Sertoli cell-spermatid junctions in testis, in cooperation with, or independently of, cadherins. Both nectin-2 and nectin-3 are ubiquitously expressed, whereas nectin-1 is abundantly expressed in brain. Nectin-2 and -3 are expressed in cells where cadherin is not expressed, such as blood cells and spermatids. All members of the nectin family have two or three splice variants. For nectin-3, three isoforms exist: nectin-3 α , -3 β and -3 γ of which nectin-3 α is the largest. Nectin-3, also known as PRR3, is a transmembrane protein that is predominantly expressed in testis and placental tissues as well in many cell lines. Nectin interacts in vivo with both long and short isoforms of afadin, an actin binding protein, at cadherin-based cell-cell adherence junctions in various tissues and cell lines. Furthermore, the ectodomains of nectin-3 and CD155 (Poliovirus Receptor) have shown strong affinity to each other. Injection of antibody 103-A1 into lumen of seminiferous tubules leads to disruption of the actin filaments in Sertoli cells at the Sertoli-maturing spermatid ectoplasmic specialization and exfoliation of maturing spermatids from the seminiferous epithelium.

Alias Poliovirus receptor-related protein 3, Nectin cell adhesion molecule 3, CD113

Gene Gene name: Nectin3, Pvrl3

Cross reactivity Human Nectin-3: No; Rat Nectin-3: No

- References**
1. Satoh-Horikawa, K et al; Nectin-3 a new member of immunoglobulin-like cell adhesion molecules that shows homophilic and heterophilic cell-cell adhesion activities. J Biol Chem 2000, 275: 10291
 2. Mizoguchi, A et al; Nectin: an adhesion molecule involved in formation of synapses. J Cell Biol, 2002, 156: 555

3. Ozaki-Kuroda, K et al; Nectin Couples Cell-Cell Adhesion and the Actin Scaffold at Heterotypic Testicular Junctions, supplementary material. *Current Biology* 2002, *12*:1145
4. Mueller, S et al; Loss of nectin-2 at Sertoli-spermatid junctions leads to male infertility and correlates with severe spermatozoan head and midpiece malformation, impaired binding to the zona pellucida, and oocyte penetration. *Biol Reprod* 2003, *69*: 1330
5. Guttman, J et al; Evidence that tubulobulbar complexes in the seminiferous epithelium are involved with internalization of adhesion junctions. *Biol of Reprod* 2004, *71*: 548
6. Inagaki, M et al; Roles of cell-adhesion molecules nectin 1 and nectin 3 in ciliary body development. *Development* 2005, *132*: 1525
7. Inagaki, M et al; Role of cell adhesion molecule nectin-3 in spermatid development. *Genes Cells*,2006, *11*: 1125

Storage&stability Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.

Precautions For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

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Approved by Manager of QC
Brenda Teunissen

Date
12/11/2019

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.