

**CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET**

<b>Product name</b>	NOD1, Human, clone 2A10		
<b>Catalog number</b>	HM2290		
<b>Lot number</b>	-	<b>Expiry date</b>	-
<b>Volume</b>	1 ml	<b>Amount</b>	100 µg
<b>Formulation</b>	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	<b>Concentration</b>	100 µg/ml
<b>Host Species</b>	Rat IgG2a	<b>Conjugate</b>	None
<b>Endotoxin</b>	N.A.	<b>Purification</b>	Protein G
<b>Storage</b>	4°C		

**Application notes**

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #	1		1					1,2
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.

- W: A reduced sample treatment and SDS-Page was used. The band size is 110 kDa.

**General Information**

<b>Description</b>	The monoclonal antibody 2A10 recognizes human Nod1. The innate immune system is the first line of defense against pathogens using various pattern recognition receptors (PRR). PRRs include toll-like receptors (TLRs), nucleotide-binding oligomerization domain (NOD)-like receptors (NLRs) and retinoic acid-inducible (RIG)-I-like receptors (RLR). The Nod-like receptor (NLR) family of proteins consists of cytosolic pattern recognition molecules involved in sensing microbial and danger signals and triggering innate immune activation. The founding members of NLRs are Nod1 and Nod2. These intracellular receptors recognize peptidoglycans. The receptor consists of three main domains. The C-terminal site recognizes the ligand via the leucine-rich repeat domain (LRR). The NOD domain facilitates the self-oligomerization and contains the ATPase activity. The N-terminal site is the caspase-recruitment domain (CARD). Proteoglycans are polymers composed of glycan chains of alternating N-acetylglucosamine (GlcNAc) and N-acetylmuramic acid (MurNAc) units cross-linked to each other by short peptides. The cross-linking of two parallel glycan chains is mediated by stem peptides that can be further linked by bridging amino acids. For activation of the immune system, Nod2 senses muramyl dipeptide (MDP), which is found in the PGN of nearly all Gram-positive and Gram-negative organisms, whereas Nod1 recognizes meso-diaminopimelic acid (meso-DAP)-containing PGN fragments. Stimulation of Nod1 or Nod2 results in the activation of NF-κB and MAPKs, through a homophilic interaction with the adaptor kinase, Rip2. Thereby driving the transcription of numerous genes involved in both innate and adaptive immune responses. Nod1 is widely expressed in many cell types and organs. Nod1 is associated with a susceptibility to inflammatory diseases, including asthma and atopic eczema and allergic diseases.
<b>Immunogen</b>	GST-tagged CARD domain (aa1–126) of Nod1 expressed in bacteria.
<b>Aliases</b>	CARD4, Nucleotide-binding oligomerization domain-containing protein 1, Caspase recruitment domain-containing protein 4
<b>Cross reactivity</b>	Mouse: Yes (very weak).
<b>References</b>	<ol style="list-style-type: none"> <li>1. Kufer, T et al; The pattern-recognition molecule Nod1 is localized at the plasma membrane at sites of bacterial interaction. <i>Cell Microbiol</i> 2008, <i>10</i>: 477</li> <li>2. Allison, C et al; Helicobacter pylori Induces MAPK Phosphorylation and AP-1 Activation via a NOD1-Dependent Mechanism. <i>J Immunol</i> 2009, <i>183</i>: 8099</li> </ol>
<b>Storage&amp;stability</b>	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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We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC  
Robbert Zwinkels

Date  
16/03/2018

Do you have any questions or comments regarding this product? Please contact us via [support@hycultbiotech.com](mailto:support@hycultbiotech.com).