Datasheet for ABIN3136936

# Neuroligin 1 Protein (NLGN1) (AA 46-843) (rho-1D4 tag)

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## Overview

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| Quantity: | 1 mg |
| Target: | Neuroligin 1 (NLGN1) |
| Protein Characteristics: | AA 46-843 |
| Origin: | Mouse |
| Source: | Insect Cells |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This Neuroligin 1 protein is labelled with rho-1D4 tag. |
| Application: | ELISA, Western Blotting (WB), SDS-PAGE (SDS), Crystallization (Crys) |

## Product Details

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| Sequence: | QKLDDVDPLV TTNFGKIRGI KKELNNEILG PVIQFLGVPY AAPPTGEHRF QPPEPPSPWS DIRNATQFAP VCPQNIIDGR LPEVMLPVWF TNNLDVVSSY VQDQSEDCLY LNIYVPTEDG PLTKKHTDDL GDNDGAEDED IRDSGGPKPV MVYIHGGSYM EGTGNLYDGS VLASYGNVIV ITVNYRLGVL GFLSTGDQAA KGNYGLLDLI QALRWTSENI GFFGGDPLRI TVFGSGAGGS CVNLLTLSHY SEGNRWSNST KGLFQRAIAQ SGTALSSWAV SFQPAKYARI LATKVGCNVS DTVELVECLQ KKPYKELVDQ DVQPARYHIA FGPVIDGDVI PDDPQILMEQ GEFLNYDIML GVNQGEGLKF VENIVDSDDG VSASDFDFAV SNFVDNLYGY PEGKDVLRET IKFMYTDWAD RHNPETRRKT LLALFTDHQW VAPAVATADL HSNFGSPTYF YAFYHHCQTD QVPAWADAAH GDEVPYVLGI PMIGPTELFP CNFSKNDVML SAVVMTYWTN FAKTGDPNQP VPQDTKFIHT KPNRFEEVAW TRYSQKDQLY LHIGLKPRVK EHYRANKVNL WLELVPHLHN LNDISQYTST TTKVPSTDIT LRPTRKNSTP VTSAFPTAKQ DDPKQQPSPF SVDQRDYSTE LSVTIAVGAS LLFLNILAFA ALYYKKDKRR HDVHRRCSPQ RTTTNDLTHA PEEEIMSLQM KHTDLDHECE |

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| | SIHPHEVVLR TACPPDYTLA MRRSPDDIPL MTPNTITMIP NTIPGIQPLH TFNTFTGGQN NTLPHPHPHP HSHSTTRV<br>**Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.** |
| Characteristics: | • Made in Germany - from design to production - by highly experienced protein experts.<br>• Mouse Nlgn1 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.<br>• State-of-the-art algorithm used for plasmid design (Gene synthesis).<br><br>This protein is a made to order protein and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.<br>The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.<br>In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).<br>When you order this made-to-order protein you will only pay upon receival of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.<br>The concentration of our recombinant proteins is measured using the absorbance at 280nm. The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.<br>The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein. |
| Purification: | Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells:<br>1. Membrane proteins are fractioned by ultracentrifugation and subsequently solubilized with different detergents (detergent screen). Samples are analyzed by Western blot.<br>2. The best performing detergent is used for solubilization and the proteins are purified via their rho1D4 tag via two rho1D4 antibody columns: one DTT resistant, the other one not. Eluate fractions are analyzed by Western blot.<br>3. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatograph. Eluate fractions are analyzed by SDS-PAGE and Western blot. |
| Purity: | >95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot. |

## Product Details

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| Sterility: | 0.22 µm filtered |
| Endotoxin Level: | Protein is endotoxin-free. |
| Grade: | Crystallography grade |

## Target Details

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| Target: | Neuroligin 1 (NLGN1) |
| Alternative Name: | Nlgn1 (NLGN1 Products) |
| Background: | Cell surface protein involved in cell-cell-interactions via its interactions with neurexin family members. Plays a role in synapse function and synaptic signal transmission, and probably mediates its effects by recruiting and clustering other synaptic proteins. May promote the initial formation of synapses, but is not essential for this. In vitro, triggers the de novo formation of presynaptic structures. May be involved in specification of excitatory synapses. Required to maintain wakefulness quality and normal synchrony of cerebral cortex activity during wakefulness and sleep (PubMed:23716671). {ECO:0000269\|PubMed:10892652, ECO:0000269\|PubMed:15620359, ECO:0000269\|PubMed:16982420, ECO:0000269\|PubMed:23716671}. |
| Molecular Weight: | 90.3 kDa Including tag. |
| UniProt: | Q99K10 |
| Pathways: | Synaptic Membrane, Synaptic Vesicle Exocytosis |

## Application Details

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| Application Notes: | In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a gurantee though. |
| Comment: | Protein has not been tested for activity yet. In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest. |
| Restrictions: | For Research Use only |

## Handling

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| Format: | Liquid |
| Buffer: | 100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer. |
| Handling Advice: | Avoid repeated freeze-thaw cycles. |
| Storage: | -80 °C |
| Storage Comment: | Store at -80°C. |
| Expiry Date: | Unlimited (if stored properly) |

 