

[Go to Product page](#)

Datasheet for ABIN3150013

GRIN1/NMDAR1 Protein (AA 19-938) (rho-1D4 tag)

Overview

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| Quantity: | 0.5 mg |
| Target: | GRIN1/NMDAR1 (GRIN1) |
| Protein Characteristics: | AA 19-938 |
| Origin: | Mouse |
| Source: | Insect Cells |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This GRIN1/NMDAR1 protein is labelled with rho-1D4 tag. |
| Application: | Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys) |

Product Details

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| Sequence: | RAACDPKIVN IGAVLSTRKH EQMFREAVNQ ANKRHGSWKI QLNATSVTHK PNAIQMALSV CEDLISSQVY AILVSHPTTP NDHFTPTPVS YTAGFYRIPV LGLTTRMSIY SDKSIHLSFL RTVPPYSHQS SVWFEMMRVY NWNHIILLVS DDHEGRAAQK RLETLLLEERE SKAEKVLQFD PGTKNVTALL MEARDLEARV IILSASEDDA ATVYRAAAML NMTGSGYVWL VGEREISGNA LRYAPDGIIG LQLINGKNES AHISDAVGVV AQAVHELLEK ENITDPPRGC VGNTNIWKTG PLFKRVLMSK KYADGVTGRV EFNEDGDRKF ANYSIMNLQN RKLQVQGIYN GTHVIPNDRK IWPGGETEK PRGYQMSTRL KIVTIHQEPF VYVKPTMSDG TCKEEFTVNG DPVKKVICTG PNDTSPGSPR HTVPQCCYGF CVDLLIKLAR TMNFTYEVHL VADGKFGTQE RVNNSNKKEW NGMMGELLSG QADMIVAPLT INNERAQYIE FSKPFKYQGL TILVKKEIPR STLDSEFMQPF QSTLWLLVGL SVHVAVMLY LLDRFSPFGR FKVNSEEEEE DALTLSSAMW FSWGVLNLSG IGEGAPRSFS ARILGMVWAG FAMIIVASYT ANLAAFLVLD RPEERITGIN DPRLRNPSDK FIYATVKQSS VDIYFRRQVE LSTMYRHMEK HNYESAAEAI QAVRDNKLHA FIWDSAVLEF |
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EASQKCDLVT TGELFFRSGF GIGMRKDSPW KQNVLSILK SHENGFMEDL DKTWVRYQEC
DSRSNAPATL TFENMAGVFM LVAGGIVAGI FLIFIEIAYK RHKDARRKQM QLAAFAAVNVW
RKNLQDRKSG RAEPDPKKKA TFRAITSTLA SSFKRRRSSK DTSTGGGRGA LQNQKDTVLP
RRAIEREEGQ LQLCSRHRES

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.
- Mouse Grin1 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

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.

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.

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).

When you order this made-to-order protein you will only pay upon receipt 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.

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.

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:

1. Membrane proteins are fractioned by ultracentrifugation and subsequently solubilized with different detergents (detergent screen). Samples are analyzed by Western blot.
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.
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

Product Details

Western blot.

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| Purity: | >95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot. |
| Sterility: | 0.22 µm filtered |
| Endotoxin Level: | Protein is endotoxin-free. |
| Grade: | Crystallography grade |

Target Details

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| Target: | GRIN1/NMDAR1 (GRIN1) |
| Alternative Name: | Grin1 (GRIN1 Products) |
| Background: | NMDA receptor subtype of glutamate-gated ion channels possesses high calcium permeability and voltage-dependent sensitivity to magnesium. Modulated by glycine. This protein plays a key role in synaptic plasticity, synaptogenesis, excitotoxicity, memory acquisition and learning. It mediates neuronal functions in glutamate neurotransmission. Is involved in the cell surface targeting of NMDA receptors (By similarity). {ECO:0000250}. |
| Molecular Weight: | 104.7 kDa Including tag. |
| UniProt: | P35438 |
| Pathways: | Synaptic Membrane , Feeding Behaviour , Regulation of long-term Neuronal Synaptic Plasticity |

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 guarantee 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 |
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Handling

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| 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) |