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Datasheet for ABIN3135104

## Metabotropic Glutamate Receptor 5 Protein (AA 19-1203) (rho-1D4 tag)

### Overview

Quantity:	1 mg
Target:	Metabotropic Glutamate Receptor 5 (GRM5)
Protein Characteristics:	AA 19-1203
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This Metabotropic Glutamate Receptor 5 protein is labelled with rho-1D4 tag.
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)

### Product Details

Sequence:	<p>SAQSSERRVV AHMPGDIIG ALFSVHHQPT VDKVHERKCG AVREQYGIQR VEAMLHTLER          INSDPTLLPN ITLGCEIRDS CWHSAVALEQ SIEFIRDSLI SEEEEGLVR CVDGSSSFRR          KKPIVGIVG GSSSVAIQVQ NLLQLFNIPQ IAYSATSMDL SDKTLFKYFM RVVPSDAQQA          RAMVDIVKRY NWTYVSAVHT EGNYGESGME AFKDMSAKEG ICIAHSYKIY SNAGEQSFDK          LLKKLRSHLP KARVVACFCE GMTVRGLLMA MRRLGLAGEF LLLGSDGWAD RYDVTGDYQR          EAVGGITIKL QSPDVKWFDD YYLKLRPETN LRNPWFQEFW QHRFQCRLEG FAQENSKYNK          TCNSSLTLRT HHVQDSKMGF VINAIYSMAY GLHNMQMSLC PGYAGLCDAM KPIDGRKLLD          SLMKTNFTGV SGMILFDEN GDSPGRYEIM NFKEMGKDYF DYINVGSWDN GELKMDDDEV          WSKKNNIIRS VCSEPCEKGQ IKVIRKGEVS CCWTCTPCKE NEYVFDEYTC KACQLGSWPT          DDLTGCDLIP VQYLRWGDPE PIAAVFACL GLLATLFVTV IFIIYRDTPV VKSSSRELCY IILAGICLGY          LCTFCLIAKP KQIYCYLQRI GIGLSPAMSY SALVTKTNRI ARILAGSKKK ICTKKPRFMS          ACAQLVIAFI LICIQLGIIV ALFIMEPPDI MHDYPSIREV YLICNTNLG VVTPLGYNGL LILSCTFYAF</p>
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KTRNV PANFN EAKYIAFTMY TTCIIWLAFV PIYFGS NYKI ITMCFSV SLS ATVALGCMFV  
PKVYIILAKP ERNVRSAFTT STVVRMHVGD GKSSSAASRS SSLVNLWKRR GSSGETLRYK  
DRRLAQHKSE IECFTP KGSM GNGGRATMSS SNGKSVTWAQ NEKSTRGQHL WQRLSVHINK  
KENPNQTAVI KPFPKSTESR GQGAGAGGGS GPAAAGAGSA GCTATGGPEP PDAGPKALYD  
VAEAEERFPA AARPRSPPI STLSHLAGSA GRTDDDAPSL HSETAARSSS SQGSLMEQIS  
SVVTRFTANI TELNSMMLST AAAPGPPGTP ICSSYLIPKE IQLPTTMTTF AEIQPLPAIE  
VTGGAQPATG PSPAQETPAG AEAAPGK PDL EELVALTPPS PFRDSVDSGS TTPNSPVSES  
ALCIPSSPKY DTLIIRDYTQ SSSSL

**Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**

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### Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Mouse Grm5 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.

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### Purification:

Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells:

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

## Product Details

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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 Western blot.

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: Metabotropic Glutamate Receptor 5 (GRM5)

Alternative Name: Grm5 ([GRM5 Products](#))

Background: G-protein coupled receptor for glutamate. Ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of down-stream effectors. Signaling activates a phosphatidylinositol-calcium second messenger system and generates a calcium-activated chloride current. Plays an important role in the regulation of synaptic plasticity and the modulation of the neural network activity (By similarity). {ECO:0000250}.

Molecular Weight: 131.0 kDa Including tag.

UniProt: [Q3UVX5](#)

Pathways: [Regulation of G-Protein Coupled Receptor Protein Signaling](#), [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

## Application Details

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options with you in detail to assure that you receive your protein of interest.

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Restrictions: For Research Use only

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## Handling

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Format: Liquid

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Buffer: 100 mM NaCl, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.

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Handling Advice: Avoid repeated freeze-thaw cycles.

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Storage: -80 °C

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Storage Comment: Store at -80°C.

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Expiry Date: Unlimited (if stored properly)

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