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Datasheet for ABIN3135507
RAGE Protein (AA 23-402) (rho-1D4 tag)

Overview

Quantity:	1 mg
Target:	RAGE (AGER)
Protein Characteristics:	AA 23-402
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This RAGE protein is labelled with rho-1D4 tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence: GQNITARIGE PLVLSCKGAP KKPPQLEWK LNTGRTEAWK VLSPQGGPWD SVARILPNGS
LLLPGATGIVD EGTFRCRATN RRGKEVKSNY RVRVYQIPGK PEIVDPASEL TASVPNKVGT
CVSEGSYPAG TLSWHLDGKL LIPDGKETLV KEETRRHPET GLFTLRSELT VIPTQGGTHP
TFSCSFLGL PRRRPLNTAP IQLRVREPGP PEGIQLLVEP EGGIVAPGGT VTLTCAISAQ
PPPQVHWIKD GAPLPLAPSP VLLLPEVGHE DEGTYS CVAT HPSHG PQESP PVSIRV TETG
DEGPAEGSVG ESGLGTLALA LGILGGLGVV ALLVGAILWR KRQPRREERK APESQEDEEE
RAELNQSEEA EMPENGAGGP

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 Ager 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: <ol style="list-style-type: none">1. Membrane proteins are fractionated 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 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

Target: RAGE (AGER)

Alternative Name: Ager ([AGER Products](#))

Background: Mediates interactions of advanced glycosylation end products (AGE). These are nonenzymatically glycosylated proteins which accumulate in vascular tissue in aging and at an accelerated rate in diabetes. Acts as a mediator of both acute and chronic vascular inflammation in conditions such as atherosclerosis and in particular as a complication of diabetes. AGE/RAGE signaling plays an important role in regulating the production/expression of TNF-alpha, oxidative stress, and endothelial dysfunction in type 2 diabetes. Interaction with S100A12 on endothelium, mononuclear phagocytes, and lymphocytes triggers cellular activation, with generation of key proinflammatory mediators. Interaction with S100B after myocardial infarction may play a role in myocyte apoptosis by activating ERK1/2 and p53/TP53 signaling. Can also bind oligonucleotides. Receptor for amyloid beta peptide. Contributes to the translocation of amyloid-beta peptide (ABPP) across the cell membrane from the extracellular to the intracellular space in cortical neurons. ABPP-initiated RAGE signaling, especially stimulation of p38 mitogen-activated protein kinase (MAPK), has the capacity to drive a transport system delivering ABPP as a complex with RAGE to the intraneuronal space. RAGE-dependent signaling in microglia contributes to neuroinflammation, amyloid accumulation, and impaired learning/memory in a mouse model of Alzheimer disease.

{ECO:0000269|PubMed:10399917, ECO:0000269|PubMed:18539754, ECO:0000269|PubMed:19901339, ECO:0000269|PubMed:19906677}., Isoform 2: Is able to advanced glycosylation end product (AGE)-induce nuclear factor NF-kappa-B activation. {ECO:0000269|PubMed:16503878}., Isoform 10: Down-regulates receptor for advanced glycosylation end products (RAGE)-ligand induced signaling through various MAPK pathways including ERK1/2, p38 and SAPK/JNK. Significantly affects tumor cell properties through decreasing cell migration, invasion, adhesion and proliferation, and increasing cellular apoptosis. Exhibits drastic inhibition on tumorigenesis in vitro.

{ECO:0000269|PubMed:24260107}.

Molecular Weight: 41.7 kDa Including tag.

UniProt: [Q62151](#)

Pathways: [Carbohydrate Homeostasis](#), [Toll-Like Receptors Cascades](#), [Smooth Muscle Cell Migration](#), [S100 Proteins](#)

Application Details

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

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)
