

Datasheet for ABIN3131913

## SIGMAR1 Protein (AA 1-223) (Strep Tag)



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### Overview

Quantity:	250 µg
Target:	SIGMAR1
Protein Characteristics:	AA 1-223
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SIGMAR1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

### Product Details

Brand:	ALiCE®
Sequence:	<p>MPWAAGRRWA WITLILTIIA VLIQAAWLWL GTQNFVFSRE EIAQLARQYA GLDHELAFSR  LIVELRRLHP GHVLPDEELQ WVFVNAGGWM GAMCILHASL SEYVLLFGTA LGSHGHSGRY  WAEISDTIIS GTFHQWKEGT TKSEVFYPGE TVVHGPGAT ALEWGPNTWM VEYGRGVIPS  TLFFALADTF FSTQDYLTFL YTLRAYARGL RLELTYYLFG QDS</p> <p><b>Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.</b></p>
Characteristics:	<p>Key Benefits:</p> <ul style="list-style-type: none"> <li>• Made in Germany - from design to production - by highly experienced protein experts.</li> <li>• Protein expressed with ALiCE® and purified in one-step affinity chromatography</li> <li>• These proteins are normally active (enzymatically functional) as our customers have</li> </ul>

- reported (not tested by us and not guaranteed).
- 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 try to ensure that you receive soluble 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.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:	One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®).
Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

Target Details

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Target:	SIGMAR1
Alternative Name:	Sigmar1 ( <a href="#">SIGMAR1 Products</a> )
Background:	Sigma non-opioid intracellular receptor 1 (Sigma 1-type opioid receptor) (Sigma1-receptor)

## Target Details

(Sigma1R),FUNCTION: Functions in lipid transport from the endoplasmic reticulum and is involved in a wide array of cellular functions probably through regulation of the biogenesis of lipid microdomains at the plasma membrane (PubMed:12730355). Involved in the regulation of different receptors it plays a role in BDNF signaling and EGF signaling. Also regulates ion channels like the potassium channel and could modulate neurotransmitter release. Plays a role in calcium signaling through modulation together with ANK2 of the ITP3R-dependent calcium efflux at the endoplasmic reticulum. Plays a role in several other cell functions including proliferation, survival and death. Originally identified for its ability to bind various psychoactive drugs it is involved in learning processes, memory and mood alteration (PubMed:11149946, PubMed:14622179, PubMed:15571673, PubMed:15777781, PubMed:23332758, PubMed:9425306, PubMed:9603192). Necessary for proper mitochondrial axonal transport in motor neurons, in particular the retrograde movement of mitochondria (PubMed:25678561). Plays a role in protecting cells against oxidative stress-induced cell death via its interaction with RNF112 (PubMed:26792191). {ECO:0000269|PubMed:11149946, ECO:0000269|PubMed:12730355, ECO:0000269|PubMed:14622179, ECO:0000269|PubMed:15571673, ECO:0000269|PubMed:15777781, ECO:0000269|PubMed:23332758, ECO:0000269|PubMed:25678561, ECO:0000269|PubMed:26792191, ECO:0000269|PubMed:9425306, ECO:0000269|PubMed:9603192}.

Molecular Weight: 25.3 kDa

UniProt: [O55242](#)

Pathways: [SARS-CoV-2 Protein Interactome](#)

## 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.

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Application Details

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Restrictions: For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol <b>Might differ depending on protein.</b>
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months