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# SMARCAD1 Protein (AA 1-1021) (His tag)



**Image** 



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### Overview

| Quantity:                     | 1 mg   |
|-------------------------------|--|
| Target:                       | SMARCAD1   |
| Protein Characteristics:      | AA 1-1021  |
| Origin:                       | Mouse  |
| Source:                       | Insect Cells   |
| Protein Type:                 | Recombinant  |
| Purification tag / Conjugate: | This SMARCAD1 protein is labelled with His tag.                      |
| Application:                  | ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS) |

### **Product Details**

Sequence:

MNLFNLDRFR FEKRSKIEEA PEAAPQPSQA RPSSPISLSA EEENAEGEGS RANTPDSDVT
EKTEDSSVPE PPDNERKASL SCFQNQRAIQ EYIDLSSDTE DVSPNCSSTV QEKKFSKDTV
IIVSEPSEDE ESHDLPSVTR RNDSSELEDL SELEDLKDAK LQTLKELFPQ RSDSDLLKLI
ESTSTMDGAI AAALLMFGDA GGGPRKRKLS SSSEEDDVND DQSVKQPRGD RGEESNESAE
ASSNWEKQES IVLKLQKEFP NFDKQELREV LKEHEWMYTE ALESLKVFAE DQDVQCASQS
EVTNGKEVAR NQNYSKNATK IKMKQKISVK PQNGFNKKRK KNVFNPKKAV EDSEYDSGSD
AGSSLDEDYS SCEEVMEDGY KGKILHFLQV SSIAELTLIP KCSQKKAQKI TELRPFNNWE
ALFTKMSKIN GLSEDLIWNC KTVIQERDVV IRLMNKCEDI SNKLTKQVTM LTGNGGGWNR
EQPSLLNQSL SLKPYQKVGL NWLALVHKHG LNGILADEMG LGKTIQAIAF LAYLFQEGNK
GPHLIVVPAS TIDNWLREVN LWCPSLNVLC YYGSQEERKQ IRFNIHNKYE DYNVIVTTYN
CAISSSDDRS LFRRLKLNYA IFDEGHMLKN MGSIRYQHLM TINARNRLLL TGTPVQNNLL
ELMSLLNFVM PHMFSSSTSE IRRMFSSKTK PADEQSIYEK ERIAHAKQII KPFILRRVKE

EVLKLLPPKK DRIELCAMSE KQEQLYSGLF NRLKKSINNL EKNTEMCNVM MQLRKMANHP LLHRQYYTPE KLKEMSQLML KEPTHCEANP DLIFEDMEVM TDFELHVLCK QYQHINSYQL DMDLILDSGK FRALGCILSE LKQKGDRVVL FSQFTMMLDI LEVLLKHHQH RYLRLDGKTQ ISERIHLIDE FNTDMDIFVF LLSTKAGGLG INLTSANVVI LHDIDCNPYN DKQAEDRCHR VGQTKEVLVI KLISQGTIEE SMLKINQQKL KLEQDMTTVD EADEGSMPAD IATLLKTSMG L

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 Smarcad1 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 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. 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:

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

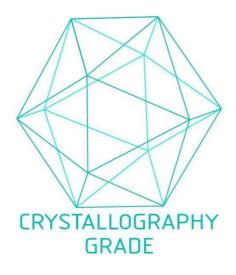
- 1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. Eluate fractions are analyzed by SDS-PAGE.
- Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

| Product Details     |   |
|---------------------|---|
| 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:             | SMARCAD1  |
| Alternative Name:   | Smarcad1 (SMARCAD1 Products)  |
| Background:         | DNA helicase that possesses intrinsic ATP-dependent nucleosome-remodeling activity and is both required for DNA repair and heterochromatin organization. Promotes DNA end resection of double-strand breaks (DSBs) following DNA damage: probably acts by weakening histone DNA interactions in nucleosomes flanking DSBs. Required for the restoration of heterochromatin organization after replication. Acts at replication sites to facilitate the maintenance of heterochromatin by directing H3 and H4 histones deacetylation, H3 'Lys-9' trimethylation (H3K9me3) and restoration of silencing (By similarity). {ECO:0000250}. |
| Molecular Weight:   | 117.4 kDa Including tag.  |
| UniProt:            | Q04692  |
| 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 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            |   |
| Format:             | Liquid  |
| Buffer:             | 100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.  |

# Handling

| Handling Advice: | Avoid repeated freeze-thaw cycles. |
|------------------|------------------------------------|
| Storage:         | -80 °C                             |
| Storage Comment: | Store at -80°C.                    |
| Expiry Date:     | Unlimited (if stored properly)     |

## **Images**



**Image 1.** "Crystallography Grade" protein due to multi-step, protein-specific purification process