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Datasheet for ABIN3095716  
**EPRS Protein (AA 1-1512) (His tag)**

### Overview

Quantity:	1 mg
Target:	EPRS
Protein Characteristics:	AA 1-1512
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This EPRS protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys)

### Product Details

Sequence: MATLSLTVNS GDPPLGALLA VEHVKDDVSI SVEEGKENIL HVSENVIFTD VNSILRYLAR  
VATTAGLYGS NLMEHTEIDH WLEFSATKLS SCDSFTSTIN ELNHCLSLRT YLVGNSLSLA  
DLCVWATLKG NAAWQEQLKQ KKAPVHVKRW FGFLEAQQAF QSVGTKWDVVS TTKARVAPEK  
KQDVGKFVEL PGAEMGKVTV RFPPEASGYL HIGHAKAALL NQHYQVNFKG KLIMRFDDTN  
PEKEKEDFEK VILEDVAMLH IKPDQFTYTS DHFETIMKYA EKLIQEGKAY VDDTPAEQMK  
AEREQRIDSK HRKNPIEKNL QMWEEMKKGS QFGQSCCLRA KIDMSSNNGC MRDPTLYRCK  
IQPHPRGTGNK YNVYPTYDFA CPIVDSIEGV THALRTTEYH DRDEQFYWII EALGIRKPYI  
WEYSRLNLNN TVLSKRKLTW FVNEGLVDGW DDPFRFPTVRG VLRRGMTVEG LKQFIAAQGS  
SRSVVMMEWD KIWAFNKKVI DPVAPRYVAL LKKEVIPVNV PEAQEEMKEV AKHPKNPEVG  
LKPVWYSPKV FIEGADAETF SEGEMVTFIN WGNLNITKIH KNADGKIISL DAKLNLENKD  
YKKTTKVTWL AETTHALPIP VICVTYEH LI TKPVLGKDED FKQYVNKNSK HEELMLGDPC  
LKDLKKGDII QLQRRGFFIC DQPYEPVSPY SCKEAPCVLI YIPDGHTKEM PTSGSKEKTK

VEATKNETSA PFKERPTPSL NNNCTTSEDS LVLYNRVAVQ GDVVRELKAK KAPKEDVDAA  
VKQLLSLKAE YKEKTGQEYK PGNPPAEIGQ NISSNSSASI LESKSLYDEV AAQGEVVRKL  
KAEKSPKAKI NEAVECLLSL KAQYKEKTGK EYIPGQPPLS QSSDSSPTRN SEPAGLETPE  
AKVLFDKVAS QGEVVRKLKT EKAPKDQVDI AVQELLQLKA QYKSLIGVEY KPVSATGAED  
KDKKKKEKEN KSEKQNKPK QNDGQRKDPS KNQGGGLSSS GAGEGQGPKK QTRLGLEAKK  
EENLADWYSQ VITKSEMIEY HDISGCYILR PWAYAIWEAI KDDFD AEIKK LGVENCYFPM  
FVSQSALEKE KTHVADFAPE VAWVTRSGKT ELAEPIAIRP TSETVMYPAY AKWWQSHRDL  
PIKLNQWCNV VRWEFKHPQP FLRTREFLWQ EGHSAFATME EAAEEVLQIL DLYAQVYEEL  
LAIPVVKGRK TEKEKFAGGD YTTTIEAFIS ASGRAIQGGT SHHLGQNFSK MFEIVFEDPK  
IPGEKQFAYQ NSWGLTTRTI GVMTMVHGDN MGLVLPPRVA CVQVVIIPCG ITNALSEEDK  
EALIAKCNDY RRRLLSVNIR VRADLRDNYS PGWKFNHWEL KGVPIRLEVG PRDMKSCQFV  
AVRRDTGEKL TVAENAETK LQAILEDIQV TLFTRASEDL KTHMVVANTM EDFQKILDG  
KIVQIPFCGE IDCEDWIKKT TARDQDLEPG APSMGAKSLC IPFKPLCELQ PGAKCVCVKGN  
PAKYITLFR SY

**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.
- Human EPRS 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.

## Product Details

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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.
2. 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.

**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:** EPRS

**Alternative Name:** EPRS ([EPRS Products](#))

**Background:** Catalyzes the attachment of the cognate amino acid to the corresponding tRNA in a two-step reaction: the amino acid is first activated by ATP to form a covalent intermediate with AMP and is then transferred to the acceptor end of the cognate tRNA. Component of the GAIT (gamma interferon-activated inhibitor of translation) complex which mediates interferon-gamma-induced transcript-selective translation inhibition in inflammation processes. Upon interferon-gamma activation and subsequent phosphorylation dissociates from the multisynthetase complex and assembles into the GAIT complex which binds to stem loop-containing GAIT elements in the 3'-UTR of diverse inflammatory mRNAs (such as ceruplasmin) and suppresses their translation. {ECO:0000269|PubMed:15479637, ECO:0000269|PubMed:1756734, ECO:0000269|PubMed:23071094}.

**Molecular Weight:** 171.5 kDa Including tag.

**UniProt:** [P07814](#)

## Application Details

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**Application Notes:** In addition to the applications listed above we expect the protein to work for functional studies

## Application Details

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as well. As the protein has not been tested for functional studies yet we cannot offer a gurantee though.

Comment: 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

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)