

Datasheet for ABIN3136771  
**EGLN3 Protein (AA 1-239) (His tag)**[Go to Product page](#)

## 1 Image

## Overview

|                               |                                                                      |
|-------------------------------|----------------------------------------------------------------------|
| Quantity:                     | 1 mg                                                                 |
| Target:                       | EGLN3                                                                |
| Protein Characteristics:      | AA 1-239                                                             |
| Origin:                       | Mouse                                                                |
| Source:                       | Insect Cells                                                         |
| Protein Type:                 | Recombinant                                                          |
| Purification tag / Conjugate: | This EGLN3 protein is labelled with His tag.                         |
| Application:                  | SDS-PAGE (SDS), ELISA, Western Blotting (WB), Crystallization (Crys) |

## Product Details

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sequence:        | <p>MPLGHIMRLD LEKIALEYIV PCLHEVGFCY LDNFLGEVVG DCVLERVKQL HYNALRDGQ<br/>LAGPRAGVSK RHLRGDQITW IGGNEEGCEA INFLSLIDR LVLYCGSRLG KYVVKERSKA<br/>MVACYPGNGT GYVRHVDNPN GDGRCITCIY YLNKNWDAKL HGGVLRIFPE GKSFVADVEP<br/>IFDRLLFFWS DRRNPHEVQP SYATRYAMTV WYFDAEERAE AKKKFRNLTR KTESALAKD</p> <p><b>Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.</b></p>                                                                                                              |
| Characteristics: | <ul style="list-style-type: none"><li>• Made in Germany - from design to production - by highly experienced protein experts.</li><li>• Mouse EglN3 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.</li><li>• State-of-the-art algorithm used for plasmid design (Gene synthesis).</li></ul> <p>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.</p> |

## Product Details

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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:    | Two step purification of proteins expressed in baculovirus infected SF9 insect cells:<br><ol style="list-style-type: none"><li>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.</li><li>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.</li></ol> |
| 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:           | EGLN3                                                                                                                                                                                                                                                                 |
| Alternative Name: | Egln3 ( <a href="#">EGLN3 Products</a> )                                                                                                                                                                                                                              |
| Background:       | Plays a crucial role in DNA damage response (DDR) by hydroxylating TEL2, promoting its interaction with ATR which is required for activation of the ATR/CHK1/p53 pathway (By similarity). Cellular oxygen sensor that catalyzes, under normoxic conditions, the post- |

## Target Details

translational formation of 4-hydroxyproline in hypoxia-inducible factor (HIF) alpha proteins. Hydroxylates a specific proline found in each of the oxygen-dependent degradation (ODD) domains (N-terminal, NODD, and C-terminal, CODD) of HIF1A. Also hydroxylates HIF2A. Has a preference for the CODD site for both HIF1A and HIF2A. Hydroxylation on the NODD site by EGLN3 appears to require prior hydroxylation on the CODD site. Hydroxylated HIFs are then targeted for proteasomal degradation via the von Hippel-Lindau ubiquitination complex. Under hypoxic conditions, the hydroxylation reaction is attenuated allowing HIFs to escape degradation resulting in their translocation to the nucleus, heterodimerization with HIF1B, and increased expression of hypoxia-inducible genes. EGLN3 is the most important isozyme in limiting physiological activation of HIFs (particularly HIF2A) in hypoxia. Also hydroxylates PKM in hypoxia, limiting glycolysis. Under normoxia, hydroxylates and regulates the stability of ADRB2. Regulator of cardiomyocyte and neuronal apoptosis. In cardiomyocytes, inhibits the anti-apoptotic effect of BCL2 by disrupting the BAX-BCL2 complex. In neurons, has a NGF-induced proapoptotic effect, probably through regulating CASP3 activity. Also essential for hypoxic regulation of neutrophilic inflammation. Target proteins are preferentially recognized via a LXXLAP motif. {ECO:0000250, ECO:0000269|PubMed:21317538}.

Molecular Weight: 28.3 kDa Including tag.

UniProt: [Q91UZ4](#)

Pathways: [Positive Regulation of Endopeptidase Activity](#)

## 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

|                  |                                    |
|------------------|------------------------------------|
| Handling Advice: | Avoid repeated freeze-thaw cycles. |
|------------------|------------------------------------|

|          |        |
|----------|--------|
| Storage: | -80 °C |
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|                  |                 |
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| Storage Comment: | Store at -80°C. |
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|--------------|--------------------------------|
| Expiry Date: | Unlimited (if stored properly) |
|--------------|--------------------------------|

## Images



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