

Datasheet for ABIN3092171

**DGCR8 Protein (AA 1-773) (His tag)****1** Image[Go to Product page](#)

## Overview

Quantity:	1 mg
Target:	DGCR8
Protein Characteristics:	AA 1-773
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This DGCR8 protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)

## Product Details

Sequence:	METDESPSPL PCGPAGEAVM ESRARPFQAL PREQSPPPPL QTSSGAEVMD VGSGGDGQSE LPAEDPFNFY GASLLSKGSF SKGRLLIDPN CSGHSPRTAR HAPAVRKFSF DLKLLKDVKI SVSFTESCRS KDRKVLTYGA ERDVRAEGL LLSPVSGDVH ACPFGGSGVD GVGIGGESAD KKDEENELDQ EKRVEYAVLD ELEDFTDNLE LDEEGAGGFT AKAIVQRDRV DEEALNFPYE DDFDNDVDAL LEEGLCAPKK RRTEEKYGGD SDHPSDGETS VQPMMTKIKT VLKSRGRPPT EPLPDGWIMT FHNSGVPVYL HRESRVVTWS RPYFLGTGSI RKHDPPLSSI PCLHYKKMKD NEEREQSSDL TPGSDVSPVK PLSRSAELEF PLDEPD SMGA DPGPPDEKDP LGAEAAPGAL GQVKAKVEVC KDESVDLEEF RSYLEKRFDF EQVTVKKFRT WAERRQFNRE MKRKQAESER PILPANQKLI TLSVQDAPTK KEFVINPNGK SEVCILHEYM QRVLKVRPVY NFFECENPSE PFGASVTIDG VTYGSGTASS KKLAKNKAAR ATLEILIPDF VKQTSEEKPK DSEELEYFNH ISIEDSRVYE LTSKAGLLSP YQILHECLKR NHGMGDTSIK FEVVPGKNQK SEYVMACGKH TVRGWCKNKR VGKQLASQKI LQLLHPHVKN WGSLLRMYGR ESSKMVKQET SDKSVIELQQ
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YAKKNKPNLH ILSKLQEEMK RLAEEREETR KKKPKMSIVAS AQPGEPLCT VDV

**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 DGCR8 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.

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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.

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Purity:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

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Sterility:

0.22 µm filtered

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Endotoxin Level:

Protein is endotoxin free.

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## Product Details

Grade: Crystallography grade

## Target Details

Target: DGCR8

Alternative Name: DGCR8 ([DGCR8 Products](#))

Background: Component of the microprocessor complex that acts as a RNA- and heme-binding protein that is involved in the initial step of microRNA (miRNA) biogenesis. Component of the microprocessor complex that is required to process primary miRNA transcripts (pri-miRNAs) to release precursor miRNA (pre-miRNA) in the nucleus. Within the microprocessor complex, DGCR8 function as a molecular anchor necessary for the recognition of pri-miRNA at dsRNA-ssRNA junction and directs DROSHA to cleave 11 bp away from the junction to release hairpin-shaped pre-miRNAs that are subsequently cut by the cytoplasmic DICER to generate mature miRNAs (PubMed:26027739, PubMed:26748718). The heme-bound DGCR8 dimer binds pri-miRNAs as a cooperative trimer (of dimers) and is active in triggering pri-miRNA cleavage, whereas the heme-free DGCR8 monomer binds pri-miRNAs as a dimer and is much less active. Both double-stranded and single-stranded regions of a pri-miRNA are required for its binding (PubMed:15531877, PubMed:15574589, PubMed:15589161, PubMed:16751099, PubMed:16906129, PubMed:16963499, PubMed:17159994). Specifically recognizes and binds N6-methyladenosine (m6A)-containing pri-miRNAs, a modification required for pri-miRNAs processing (PubMed:25799998). Involved in the silencing of embryonic stem cell self-renewal (By similarity). {ECO:0000250|UniProtKB:Q9EQM6, ECO:0000269|PubMed:15531877, ECO:0000269|PubMed:15574589, ECO:0000269|PubMed:15589161, ECO:0000269|PubMed:16751099, ECO:0000269|PubMed:16906129, ECO:0000269|PubMed:16963499, ECO:0000269|PubMed:17159994, ECO:0000269|PubMed:25799998, ECO:0000269|PubMed:26027739, ECO:0000269|PubMed:26748718}.

Molecular Weight: 87.0 kDa Including tag.

UniProt: [Q8WYQ5](#)

Pathways: [Regulatory RNA Pathways](#)

## 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

Application Details

	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

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)

Images



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