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# BATF Protein (AA 1-125) (His tag)





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Quantity:	1 mg
Target:	BATF
Protein Characteristics:	AA 1-125
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This BATF protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS), Crystallization (Crys)
Product Details	
Sequence:	MPHSSDSSDS SFSRSPPPGK QDSSDDVRKV QRREKNRIAA QKSRQRQTQK ADTLHLESED
	LEKQNAALRK EIKQLTEELK YFTSVLSSHE PLCSVLASGT PSPPEVVYSA HAFHQPHISS PRFQP
	Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a
	special request, please contact us.
Characteristics:	<ul> <li>Made in Germany - from design to production - by highly experienced protein experts.</li> <li>Mouse Batf 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>
	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.

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:	BATF
Alternative Name:	Batf (BATF Products)
Background:	AP-1 family transcription factor that controls the differentiation of lineage-specific cells in the
	immune system: specifically mediates the differentiation of T-helper 17 cells (Th17), follicular T-
	helper cells (TfH), CD8(+) dendritic cells and class-switch recombination (CSR) in B-cells. Acts
	via the formation of a heterodimer with JUNB that recognizes and binds DNA sequence 5'-
	TGA[CG]TCA-3'. The BATF-JUNB heterodimer also forms a complex with IRF4 (or IRF8) in

immune cells, leading to recognition of AICE sequence (5'-TGAnTCA/GAAA-3'), an immunespecific regulatory element, followed by cooperative binding of BATF and IRF4 (or IRF8) and activation of genes. Controls differentiation of T-helper cells producing interleukin-17 (Th17 cells) by binding to Th17-associated gene promoters: regulates expression of the transcription factor RORC itself and RORC target genes such as IL17 (IL17A or IL17B). Also involved in differentiation of follicular T-helper cells (TfH) by directing expression of BCL6 and MAF. In Bcells, involved in class-switch recombination (CSR) by controlling the expression of both AICDA and of germline transcripts of the intervening heavy-chain region and constant heavy-chain region (I(H)-C(H)). Following infection, can participate in CD8(+) dendritic cell differentiation via interaction with IRF4 and IRF8 to mediate cooperative gene activation. Regulates effector CD8(+) T-cell differentiation by regulating expression of SIRT1. Following DNA damage, part of a differentiation checkpoint that limits self-renewal of hematopoietic stem cells (HSCs): upregulated by STAT3, leading to differentiation of HSCs, thereby restricting self-renewal of HSCs. {ECO:0000269|PubMed:11466704, ECO:0000269|PubMed:12594265,

ECO:0000269|PubMed:19578362, ECO:0000269|PubMed:20421391,

ECO:0000269|PubMed:21572431, ECO:0000269|PubMed:22001828,

ECO:0000269|PubMed:22385964, ECO:0000269|PubMed:22983707,

ECO:0000269|PubMed:22992523, ECO:0000269|PubMed:22992524,

ECO:0000269|PubMed:23021777}.

Molecular Weight:

15.0 kDa Including tag.

UniProt:

035284

#### **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.

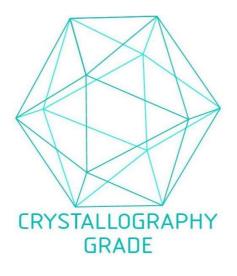
Restrictions:

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 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