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Datasheet for ABIN3096189
TYK2 Protein (AA 1-1187) (Strep Tag)

Overview

Quantity:	1 mg
Target:	TYK2
Protein Characteristics:	AA 1-1187
Origin:	Human
Source:	Tobacco (<i>Nicotiana tabacum</i>)
Protein Type:	Recombinant
Purification tag / Conjugate:	This TYK2 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence: MPLRHWGMAR GSKPVGDAQ PMAAMGGLKV LLHWAGPGGG EPWVTFSESS LTAEVCIHI
AHKVGITPPC FNLFALFDAQ AQVWLPPNHI LEIPRDASLM LYFRIRFYFR NWHGMNPREP
AVYRCGPPGT EASSDQTAQG MQLLDPASFE YLFEQKHEF VNDVASLWEL STEEIIHFFK
NESLGMFLH LCHLALRHGI PLEEVAKKTS FKDCIPRSFR RHIRQHSALT RLRLRVFRR
FLRDFQPGR L SQQMVMVKYL ATLERLAPRF GTERVPVCHL RLLAQAE GEP CYIRDSGVAP
TDPGPESAAG PPTHEVLVTG TGGIQWVPVE EEVNKEEGSS GSSGRNPQAS LFGKKAKAHK
AVGQPADRPR EPLWAYFCDF RDITHVVLKE HC VSIHRQDN KCLELSLPSR AAALS FVSLV
DGYFRLTADS SHYLCHEVAP PRLVMSIRDG IHGPLLEPFV QAKLRPEDGL YLIHWSTSH P
YRLILTVAQR SQAPDGMQSL RLRKFPIEQQ DGAFVLEGWG RSFSPVRELG AALQGCLLRA
GDDCFSLRRC CLPQPGETSN LIIMRGARAS PRTLNLSQLS FHRVDQKEIT QLSHLGQGTR
TNVYEGRLRV EGSGDPEEGK MDDEDPLVPG RDRGQELRVV LKVLDP SHHD IALAFYETAS
LMSQVSHTHL AFVHGVCVRG PENIMVTEYV EHGPLDVWLR RERGHVPM AW KMVVAQQLAS

ALSYLENKNL VHGNVCGRNI LLARLGLAEG TSPFIKLSDP GVGLGALSRE ERVERIPWLA
PECLPGGANS LSTAMDKWGF GATLLEICFD GEAPLQSRSP SEKEHFYQRQ HRLPEPSCPQ
LATLTSQCLT YEPTQRPSFR TILRDLTRLQ PHNLADVLTV NPDSPASDPT VFHKRYLKKI
RDLGEGHFGK VSLYCYDPTN DGTGEMVAVK ALKADCGPQH RSGWKQEIDI LRTLYHEHII
KYKGCCEDQG EKSLQLVMEY VPLGSLRDYL PRHSIGLAQL LLFAQQICEG MAYLHAQHVI
HRDLAARNVL LDNDRLVKIG DFGLAKAVPE GHEYRVRVED GDSPVFWYAP ECLKEYKFYI
ASDVWSFGVT LYELLTHCDS SQSPPTKFLE LIGIAQQQMT VLRLTELLER GERLPRPKC
PCEVYHLMKN CWETEASFRP TFENLIPILK TVHEKYQGQA PSVFSVC

Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.

Characteristics:

Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- 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.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Product Details

Concentration:

- 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.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:

Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):

1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. 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:

>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Endotoxin Level:

Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

Target Details

Target:

TYK2

Alternative Name:

TYK2 ([TYK2 Products](#))

Background:

Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2),FUNCTION: Tyrosine kinase of the non-receptor type involved in numerous cytokines and interferons signaling, which regulates cell growth, development, cell migration, innate and adaptive immunity (PubMed:8232552, PubMed:7813427, PubMed:7657660, PubMed:10995743, PubMed:10542297). Plays both structural and catalytic roles in numerous interleukins and interferons (IFN-alpha/beta) signaling (PubMed:10542297). Associates with heterodimeric cytokine receptor complexes and activates STAT family members including STAT1, STAT3, STAT4 or STAT6 (PubMed:10542297, PubMed:7638186). The heterodimeric cytokine receptor complexes are composed of (1) a TYK2-associated receptor chain (IFNAR1, IL12RB1, IL10RB or IL13RA1), and (2) a second receptor chain associated either with JAK1 or JAK2 (PubMed:7813427, PubMed:10542297, PubMed:7526154, PubMed:25762719). In response to cytokine-binding to receptors, phosphorylates and activates receptors (IFNAR1, IL12RB1, IL10RB or IL13RA1), creating docking sites for STAT members (PubMed:7526154, PubMed:7657660). In turn, recruited STATs are phosphorylated by TYK2 (or JAK1/JAK2 on the second receptor chain), form homo- and heterodimers, translocate to the nucleus, and regulate cytokine/growth factor responsive

Target Details

genes (PubMed:7657660, PubMed:10542297, PubMed:25762719). Negatively regulates STAT3 activity by promoting phosphorylation at a specific tyrosine that differs from the site used for signaling (PubMed:29162862). {ECO:0000269|PubMed:10542297, ECO:0000269|PubMed:10995743, ECO:0000269|PubMed:25762719, ECO:0000269|PubMed:29162862, ECO:0000269|PubMed:7526154, ECO:0000269|PubMed:7638186, ECO:0000269|PubMed:7657660, ECO:0000269|PubMed:7813427, ECO:0000269|PubMed:8232552}.

Molecular Weight: 133.7 kDa

UniProt: [P29597](#)

Pathways: [JAK-STAT Signaling](#), [Hepatitis C](#)

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: ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.

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Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.

Handling Advice: Avoid repeated freeze-thaw cycles.

Handling

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: Unlimited (if stored properly)