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Datasheet for ABIN3082034

## IFT74 Protein (AA 1-600) (Strep Tag)

### 1 Image

#### Overview

Quantity:	1 mg
Target:	IFT74
Protein Characteristics:	AA 1-600
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This IFT74 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

#### Product Details

Sequence: MASNHKSSAA RPVSRGGVGL TGRPPSGIRP LSGNIRVATA MPPGTARPGS RGCPIGTGGV  
LSSQIKVAHR PVTQQGLTGM KTGTKGPQRQ ILDKSYLGL LRSKISELTT EVNKLQKGIE  
MYNQENSVYL SYEKRAETLA VEIKELQGQL ADYNMLVDKL NTNTEMEEVN NDYNMLKAQN  
DRETQSLDVI FTERQAKEKQ IRSEVEEIEQ EKQATDDIIK NMSFENQVKY LEMKTTNEKL  
LQELDTLQQQ LDSQNMKKES LEAEIAHSQV KQEAVLLHEK LYELESHRDQ MIAEDKSIGS  
PMEEREKLLK QIKDDNQEIA SMERQLTDTK EKINQFIEI RQLDMDLEEH QGEMNQKYKE  
LKKREEHMDT FIETFEETKN QELKRKAQIE ANIVALLEHC SRNINRIEQI SSITNQLKLM  
MQDDLNFKST EVQKSQSTAQ NLTSDIQLRQ LDLQKMELLE SKMTEEQHSL KSKIKQMTTD  
LEIYNDLPAL KSSGEEKIKK LHQERMILST HRNAFKKIME KQNIYEALK TQLQENETHS  
QLTNLERKWQ HLEQNNFAMK EFIATKSQES DYQPIKKNVT KQIAEYNKTI VDALHSTSGN

**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.

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#### 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!

#### 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.

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#### 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.

## Product Details

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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)

Grade: Crystallography grade

## Target Details

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Target: IFT74

Alternative Name: IFT74 ([IFT74 Products](#))

Background: Intraflagellar transport protein 74 homolog (Capillary morphogenesis gene 1 protein) (CMG-1) (Coiled-coil domain-containing protein 2),FUNCTION: Component of the intraflagellar transport (IFT) complex B: together with IFT81, forms a tubulin-binding module that specifically mediates transport of tubulin within the cilium (PubMed:23990561). Binds beta-tubulin via its basic region (PubMed:23990561). Required for ciliogenesis (PubMed:23990561). Essential for flagellogenesis during spermatogenesis (PubMed:33689014).  
{ECO:0000269|PubMed:23990561, ECO:0000269|PubMed:33689014}.

Molecular Weight: 69.2 kDa

UniProt: [Q96LB3](#)

Pathways: [Hedgehog Signaling, Chromatin Binding](#)

## Application Details

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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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## Application Details

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Restrictions: For Research Use only

## Handling

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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.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: Unlimited (if stored properly)

## Images

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