

Datasheet for ABIN7555807  
**TIGAR Protein (AA 1-270) (His tag)**



[Go to Product page](#)

## Overview

Quantity:	1 mg
Target:	TIGAR
Protein Characteristics:	AA 1-270
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This TIGAR protein is labelled with His tag.

## Product Details

Purpose:	Custom-made recombinant TIGAR Protein expressed in mammalian cells.
Sequence:	MARFALTVVR HGETRFNKEK IIQQQGVDEP LSETGFKQAA AAGIFLNNVK FTHAFSSDLM RTKQTMHGIL ERSKFCKDMT VKYDSRLRER KYGVVEGKAL SELRAMAKAA REECPVFTPP GGETLDQVKM RGIDFFFLC QLILKEADQK EQFSQGSPSN CLETSLAEIF PLGKNHSSKV NSDSGIPGLA ASVLVSHGA YMRSFLDYFL TDLKCSLPAT LSRSELM SVT PNTGMSLFII NFEEGREVKP TVQCICMNLQ DHLNGLTETR <b>Sequence without tag. The proposed Purification-Tag is based on experiences 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.</b>
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.
Characteristics:	Key Benefits:

## Product Details

---

- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- 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 try to ensure that you receive soluble protein.

If you are not interested in a full length protein, please contact us for individual protein fragments.

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.

---

Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)
Grade:	custom-made

---

## Target Details

---

Target:	TIGAR
Alternative Name:	TIGAR ( <a href="#">TIGAR Products</a> )
Background:	Fructose-2,6-bisphosphatase TIGAR (EC 3.1.3.46) (TP53-induced glycolysis and apoptosis regulator) (TP53-induced glycolysis regulatory phosphatase),FUNCTION: Fructose-bisphosphatase hydrolyzing fructose-2,6-bisphosphate as well as fructose-1,6-bisphosphate (PubMed:19015259). Acts as a negative regulator of glycolysis by lowering intracellular levels of fructose-2,6-bisphosphate in a p53/TP53-dependent manner, resulting in the pentose phosphate pathway (PPP) activation and NADPH production (PubMed:16839880, PubMed:22887998). Contributes to the generation of reduced glutathione to cause a decrease in intracellular reactive oxygen species (ROS) content, correlating with its ability to protect cells from oxidative or metabolic stress-induced cell death (PubMed:16839880, PubMed:19713938, PubMed:23726973, PubMed:22887998, PubMed:23817040). Plays a role in promoting protection against cell death during hypoxia by decreasing mitochondria ROS levels in a HK2-dependent manner through a mechanism that is independent of its fructose-bisphosphatase activity (PubMed:23185017). In response to cardiac damage stress, mediates p53-induced inhibition of myocyte mitophagy through ROS levels reduction and the subsequent inactivation

---

## Target Details

---

of BNIP3. Reduced mitophagy results in an enhanced apoptotic myocyte cell death, and exacerbates cardiac damage (By similarity). Plays a role in adult intestinal regeneration, contributes to the growth, proliferation and survival of intestinal crypts following tissue ablation (PubMed:23726973). Plays a neuroprotective role against ischemic brain damage by enhancing PPP flux and preserving mitochondria functions (By similarity). Protects glioma cells from hypoxia- and ROS-induced cell death by inhibiting glycolysis and activating mitochondrial energy metabolism and oxygen consumption in a TKTL1-dependent and p53/TP53-independent manner (PubMed:22887998). Plays a role in cancer cell survival by promoting DNA repair through activating PPP flux in a CDK5-ATM-dependent signaling pathway during hypoxia and/or genome stress-induced DNA damage responses (PubMed:25928429). Involved in intestinal tumor progression (PubMed:23726973). {ECO:0000250|UniProtKB:Q8BZA9, ECO:0000269|PubMed:16839880, ECO:0000269|PubMed:19015259, ECO:0000269|PubMed:19713938, ECO:0000269|PubMed:22887998, ECO:0000269|PubMed:23185017, ECO:0000269|PubMed:23726973, ECO:0000269|PubMed:23817040, ECO:0000269|PubMed:25928429}.

---

Molecular Weight: 30.1 kDa

---

UniProt: [Q9NQ88](#)

---

Pathways: [Warburg Effect](#)

## Application Details

---

Application Notes: We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

---

Restrictions: For Research Use only

## Handling

---

Format: Liquid

---

Buffer: The buffer composition 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: 12 months