

TIGAR-TAT, human recombinant

CATALOG #:	7218-10	10 µg
	7218-50	50 µg
ALTERNATE NAMES:	TP53-induced glycolysis and apoptosis regulator (TIGAR)	
SOURCE:	E. Coli	
PURITY:	≥ 95% by SDS-PAGE gel and HPLC analyses	
MOL. WEIGHT:	31.6 kDa	
ENDOTOXIN LEVEL:	< 0.1 ng/µg of protein (<1 EU/µg).	
FORM:	Lyophilized	
FORMULATION:	Sterile filtered through a 0.2 micron filter. Lyophilized from 10 mM Sodium Phosphate, pH 7.5.	
STORAGE CONDITIONS:	Store at -20°C. After reconstitution, aliquot and store at -20°C to -80°C. Avoid repeated freezing and thawing cycles.	

RECONSTITUTION:
Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

DESCRIPTION:
TIGAR is a p53-inducible enzyme that catalyzes the hydrolysis of fructose-2-6 bisphosphate (F-2-6-BP) to fructose-6-phosphate and inorganic phosphate. F-2-6-BP is a powerful activator of 6-phosphofructose-1 kinase, the rate limiting enzyme of glycolysis. By lowering the intracellular level of F-2-6-BP, TIGAR expression leads to increased glucose processing via the pentose phosphate pathway, the major cellular source for NADPH. Protein transduction using TAT fusion proteins represents an alternative

methodology for introducing transcription factors and other intracellular proteins into primary as well as transformed cells. Recombinant human TIGAR-TAT expressed in E. coli is a 31.6 kDa protein containing 283 amino-acid residues, including the 269 residues of full-length TIGAR fused to a 14-residue C-terminal peptide containing the TAT transduction domain (GGGYGRKKRRRQRRR).

AMINO ACID SEQUENCE:
 ARFALTVVVRH GETRFNKEKI IQGQGVDEPL SETGFKQAAA AGIFLNNVKF
 THAFSSDLMR TKQTMHGILE RSKFCKDMTV KYDSRLRERK YGVVEGKALS
 ELRAMAKAAR EECPVFTPPG GETLDQVKMR GIDFFFLCQ LILKEADQKE
 QFSQGSPSNC LETSLAEIFP LGKNHSSKVN SDGIPGLAA SVLVVSHGAY
 MRSLFDYFLT DLKCSLPATL SRSELMVTP NTGMSLFIIN FEEGREVKPT
 VQCICMNLQD HLNGLTETRG GGYGRKKRRQ RRR

BIOLOGICAL ACTIVITY:
Pretreatment with TIGAR-TAT for 4 hrs, using a concentration range 0.1-5.0 µg/ml, protects U2OS cells from apoptosis induced by hydrogen peroxide.

- RELATED PRODUCTS:**
- TIGAR, human recombinant (**Cat. No. 7217-10, -50**)
 - Fructose Colorimetric/Fluorometric Assay Kit (**Cat. No. K619-100**)
 - PicoProbe™ Fructose Fluorometric Assay Kit (**Cat. No. K611-100**)
 - PicoProbe™ Fructose-6-Phosphate Fluorometric Assay Kit (**Cat. No. K689-100**)

FOR RESEARCH USE ONLY! Not to be used in humans.

