

# Recombinant Human TP53-induced Glycolysis and Apoptosis Regulator-TAT (rHuTIGAR-TAT)

## ChemWhat Technical Data Sheet (TDS)

<b>Catalog Number:</b>	401-13
<b>Source:</b>	<i>Escherichia coli</i> .
<b>Molecular Weight:</b>	Approximately 31.7 kDa, a single non-glycosylated polypeptide chain containing 283 amino acids.
<b>Quantity:</b>	5µg/25µg/1000µg
<b>AA Sequence:</b>	MARFALTVVR HGETRFNKEK IIQGQGVDEP LSETGFKQAA AAGIFLNNVK FTTHAFSSDLM RTKQTMHGIL ERSKFCKDMT VKYDSRLRER KYGVVEGKAL SELRAMAKAA REECPVFTPP GGETLDQVKM RGIDFFEFLC QLILKEADQK EQFSQGPSN CLETSLAEIF PLGKNHSSKV NSDSGIPGLA ASVLVVSHGA YMRSLFDYFL TDLKCSLPAT LSRSELM SVT PNTGMSLFII NFEEGREVKP TVQCICMNLQ DHLNGLTETR GGYGRKKRRRQ RRR
<b>Purity:</b>	> 96 % by SDS-PAGE and HPLC analyses.
<b>Biological Activity:</b>	Fully biologically active when compared to standard. The biological activity determined by its ability to protect U2OS cells from apoptosis induced by hydrogen peroxide is in a concentration range of 0.1-5.0 µg/ml, after pretreating with rHuTIGAR-TAT for 4 hours.
<b>Physical Appearance:</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Formulation:</b>	Lyophilized from a 0.2 µm filtered concentrated solution in 30 % Acetonitrile, 0.1% TFA.
<b>Endotoxin:</b>	Less than 0.1 EU/µg of rHuTIGAR-TAT as determined by LAL method.
<b>Reconstitution:</b>	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
<b>Shipping:</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage:</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"><li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li><li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>● 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li></ul>
<b>Usage:</b>	ChemWhat Limited in UK offers this branded product for research, development or further evaluation purposes. <b>NOT FOR HUMAN USE.</b>

### *Human TP53-induced Glycolysis and Apoptosis Regulator-TAT*

The TP53-inducible glycolysis and apoptosis regulator (TIGAR), also named fructose-2, 6-bisphosphatase TIGAR, is an enzyme that in humans is encoded by the C12orf5 gene. The protein functions by blocking glycolysis and directing the pathway into the pentose phosphate shunt. Expression of this protein also protects cells from DNA damaging reactive oxygen species and provides some protection from DNA damage-induced apoptosis. TIGAR activity can have multiple cellular effects. Recombinant human TIGAR-TAT expressed in *E. coli* is a 31.7 kDa protein containing 283 amino-acid residues, including the 270 residues of full-length TIGAR fused to a 13-residue C-terminal peptide containing the TAT transduction domain (GGYGRKKRRRQRRR).