

Product datasheet for **TA336787**

TIGAR Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	Immunohistochemistry: 1:10-1:500, Western Blot: 1:5000, Immunohistochemistry-Paraffin: 1:10-1:500
Reactivity:	Human, Mouse
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	A genomic peptide made to an internal region of the human TIGAR protein (within residues 50-200). [Swiss-Prot Q9NQ88]
Formulation:	PBS, 0.05% Sodium Azide. Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Immunogen affinity purified
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	TP53 induced glycolysis regulatory phosphatase
Database Link:	NP_065108 Entrez Gene 319801 Mouse Entrez Gene 57103 Human Q9NQ88



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Background:

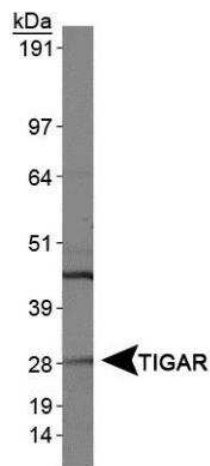
TIGAR (TP53-induced glycolysis and apoptosis regulator), a member of phosphoglycerate mutase family, is a target gene of p53 and it regulates glucose metabolism in cancer cells by acting as a fructose-bisphosphatase hydrolyzing fructose-2,6-bisphosphate (Fru-2,6-P₂) and Fru-1,6-P₂ leading to decreased Fru-2,6-P₂ levels with subsequent reduction in PFK1 (phosphofructokinase-1) activity as well as negative regulation of glycolysis. TIGAR also reduces cellular ROS through its translocation to the mitochondria where it interacts with HK2 leading to enhanced HK2 activity, regulation of mitochondrial membrane potential, and decreased mitochondrial ROS which ultimately protects the cells from DNA damage-induced apoptosis. Moreover, TIGAR mediated negative regulation of glycolysis leads to redirection of glycolytic metabolic intermediates towards pentose phosphate pathway's oxidative branch that follows increased cellular NADPH production, ROS scavenging by GSH and thus a lower sensitivity of cells to oxidative stress-associated apoptosis, including that induced by p53. Because of TIGAR's anti-apoptotic/protective role, it has been proposed to implicate in cell-cycle arrest and DNA repair effector response in cells that suffer from repairable dose of genotoxic/cellular insult.

Synonyms:

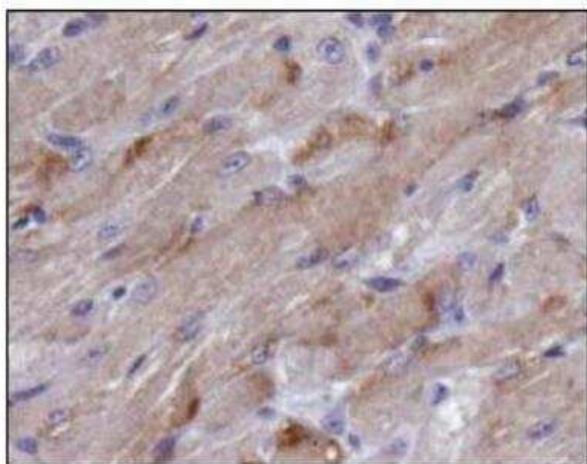
C12orf5; FR2BP

Note:

This TIGAR antibody is useful for Immunohistochemistry-paraffin sections and Western blot. In Western blot bands are seen ~30 kDa, representing TIGAR, and ~47 kDa. At this time we cannot explain the band at 47 kDa. This antibody does not appear to work in ICC.

Product images:

Western Blot: TIGAR/C12orf5 Antibody TA336787
- Analysis of TIGAR in HeLa whole cell extracts.



Immunohistochemistry: TIGAR/C12orf5 Antibody TA336787 - Analysis of TIGAR in mouse muscle.