

Anti-TIGAR antibody



Description	Unconjugated Rabbit polyclonal to TIGAR
--------------------	---

Model	STJ193103
Host	Rabbit
Reactivity	Human
Applications	ELISA, WB
Gene ID	57103
Gene Symbol	TIGAR
Dilution range	WB 1:500-2000 ELISA 1:5000-20000
Specificity	TIGAR Polyclonal Antibody detects endogenous levels of protein.
Tissue Specificity	Expressed in the brain . Expressed in breast tumors . Expressed in glioblastomas .
Purification	TIGAR antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Fructose-2,6-bisphosphatase TIGAR TP53-induced glycolysis and apoptosis regulator TP53-induced glycolysis regulatory phosphatase
Molecular Weight	29 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG

Formulation	Liquid form in PBS containing 50% glycerol, and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:1185 OMIM:610775
Alternative Names	Fructose-2,6-bisphosphatase TIGAR 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. 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. 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. 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. In response to cardiac damage stress, mediates p53-induced inhibition of myocyte mitophagy through ROS levels reduction and the subsequent inactivation of BNIP3. Reduced mitophagy results in an enhanced apoptotic myocyte cell death, and exacerbates cardiac damage. Plays a role in adult intestinal regeneration; contributes to the growth, proliferation and survival of intestinal crypts following tissue ablation. Plays a neuroprotective role against ischemic brain damage by enhancing PPP flux and preserving mitochondria functions. 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. 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. Involved in intestinal tumor progression.
Cellular Localization	Cytoplasm Nucleus Mitochondrion. Translocated to the mitochondria during hypoxia in a HIF1A-dependent manner. Colocalizes with HK2 in the mitochondria during hypoxia. Translocated to the nucleus during hypoxia and/or genome stress-induced DNA damage responses in cancer cells. Translocation to the mitochondria is enhanced in ischemic cortex after reperfusion and/or during oxygen and glucose deprivation (OGD)/reoxygenation insult in primary neurons.