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Product datasheet for TP523796

Tigar (NM_177003) Mouse Recombinant Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Purified recombinant protein of Mouse Trp53 induced glycolysis regulatory phosphatase (Tigar), with C-terminal MYC/DDK tag, expressed in HEK293T cells, 20ug
Species:	Mouse
Expression Host:	HEK293T
Expression cDNA Clone or AA Sequence:	>MR223796 representing NM_177003 Red=Cloning site Green=Tags(s) MPRFALTVIRHGETRLNKEKIIQGQGVDAPLSETGFRQAAAAGQFLSNVQFTHAFSSDLTRTKQTIHGIL EKSRFCKDMAVKYDSRLRERMYGVAEGKPLSELRAMAKAAGEECPMFTPPGGETVEQVKMRGKDFFDFIC QLILGKAGQRESVLPGAPGSGLESSLAEVFPVGKHGSLGANPKGGTLGLAASILVVSHGAYMRSLFGYFL SDLRCSLPGARDKLELSSITPNTGISVFIIDCEEARQPSIQCVCMNLQEHLNGVTEKQH TRTRPLEQKLISEEDLAANDILDYKDDDDKV
Tag:	C-MYC/DDK
Predicted MW:	29.6 kDa
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol
Note:	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
Storage:	Store at -80°C after receiving vials.
Stability:	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
RefSeq:	NP_795977
Locus ID:	319801
UniProt ID:	Q8BZA9
RefSeq Size:	3653

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Cytogenetics: 6 F3

RefSeq ORF: 807

Synonyms: 9630033F20Rik; AA793651; AI595337; C79710; C85509

Summary: Fructose-bisphosphatase hydrolyzing fructose-2,6-bisphosphate as well as fructose-1,6-bisphosphate (By similarity). 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:23726973). 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:23726973). 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 (By similarity). In response to cardiac damage stress, mediates p53-induced inhibition of myocyte mitophagy through ROS levels reduction and the subsequent inactivation of BNIP3 (PubMed:22044588). Reduced mitophagy results in an enhanced apoptotic myocyte cell death, and exacerbates cardiac damage (PubMed:22044588). 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 (PubMed:24872551). 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 (By similarity). Involved in intestinal tumor progression (PubMed:23726973).[UniProtKB/Swiss-Prot Function]