

# TIGAR (M2-P4H2): sc-101393

## BACKGROUND

TIGAR (TP53 (tumor protein 53)-induced glycolysis and apoptosis regulator), also known as C12orf5, is a 270 amino acid protein induced by the p53 tumor suppressor pathway that functions to protect against oxidative stress. TIGAR shares sequence similarity with the bisphosphate domain of the fructose-2,6-bisphosphate degrading enzyme (fructose bisphosphatase or FBPase) of the glycolysis pathway and can thus lower the intracellular levels of fructose-2,6-bisphosphate. TIGAR specifically functions to block glycolysis, leading the pathway to the pentose phosphate shunt and decreasing the intracellular concentration of reactive oxygen species. This suggests a role for TIGAR in protecting cells from reactive oxygen species that can be DNA damaging and lead to apoptosis.

## REFERENCES

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4. Corcoran, C.A., Huang, Y. and Sheikh, M.S. 2006. The regulation of energy generating metabolic pathways by p53. *Cancer Biol. Ther.* 5: 1610-1613.
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7. Zoller, H., Egg, M., Graziadei, I., Creus, M., Janecke, A.R., Löffler-Ragg, J. and Vogel, W. 2007. CFTR gene mutations in pancreatitis: frequency and clinical manifestations in an Austrian patient cohort. *Wien. Klin. Wochenschr.* 119: 527-533.
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## CHROMOSOMAL LOCATION

Genetic locus: TIGAR (human) mapping to 12p13.32.

## SOURCE

TIGAR (M2-P4H2) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to amino acids 239-248 of TIGAR of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

TIGAR (M2-P4H2) is recommended for detection of TIGAR of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TIGAR siRNA (h): sc-76662, TIGAR shRNA Plasmid (h): sc-76662-SH and TIGAR shRNA (h) Lentiviral Particles: sc-76662-V.

Molecular Weight of TIGAR: 30 kDa.

Positive Controls: U-2 OS cell lysate: sc-2295, HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.