

TIGAR (Y-20): sc-68239

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

- Schneider, A. and Whitcomb, D.C. 2002. Hereditary pancreatitis: a model for inflammatory diseases of the pancreas. *Best Pract. Res. Clin. Gastroenterol.* 16: 347-363.
- Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610775. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: C12orf5 (human) mapping to 12p13.32; 9630033F20Rik (mouse) mapping to 6 F3.

SOURCE

TIGAR (Y-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TIGAR of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-68239 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TIGAR (Y-20) is recommended for detection of TIGAR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 siRNA (m): sc-76663, TIGAR shRNA Plasmid (h): sc-76662-SH, TIGAR shRNA Plasmid (m): sc-76663-SH, TIGAR shRNA (h) Lentiviral Particles: sc-76662-V and TIGAR shRNA (m) Lentiviral Particles: sc-76663-V.

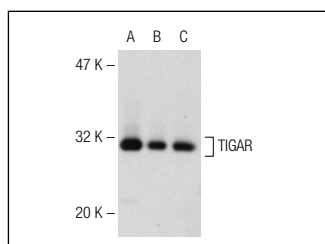
Molecular Weight of TIGAR: 30 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or Saos-2 cell lysate: sc-2235.

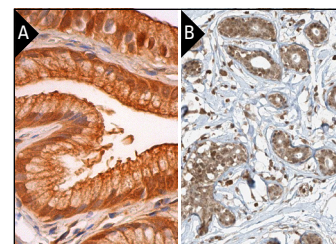
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz[™]: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



TIGAR (Y-20): sc-68239. Western blot analysis of TIGAR expression in HeLa (A), Hep G2 (B) and Saos-2 (C) whole cell lysates.



TIGAR (Y-20): sc-68239. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing nuclear and cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing nuclear and cytoplasmic staining of glandular cells in high resolution. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

SELECT PRODUCT CITATIONS

- Qi, Z., et al. 2011. Exercise training attenuates oxidative stress and decreases p53 protein content in skeletal muscle of type 2 diabetic Goto-Kakizaki rats. *Free Radic. Biol. Med.* 50: 794-800.

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.



Try **TIGAR (E-2): sc-166290** or **TIGAR (E-10): sc-166291**, our highly recommended monoclonal alternatives to TIGAR (Y-20).