

PIG3 (10A2): sc-65227

BACKGROUND

The PIG (p53-induced gene) gene family encodes redox-controlling proteins that are involved in p53 tumor suppressor activity. One member of the PIG gene family, p53-inducible gene 3 (PIG3), is a p53 responsive gene that maps, in humans, to chromosome 2p and encodes a protein with significant homology to oxidoreductases. Oxidoreductases are enzymes involved in cellular responses to oxidative stress and irradiation, and they influence the involvement of PIG3 in the metabolism of reactive oxygen species. PIG3 is localized to the cytoplasm and induced in primary, non-transformed and transformed cell cultures after exposure to genotoxic agents. The induction of PIG3 is p53 dependent and occurs with delayed kinetics as compared with other p53 downstream targets. PIG3 may act with caspase-8 as a key regulatory element in p53-dependent transcriptional deregulation by triggering the caspase cascade and mitochondrial breakdown. PIG3 is highly upregulated by p53 and may be useful for detecting transient activation of p53.

REFERENCES

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3. Flatt, P.M., Polyak, K., Tang, L.J., Scatena, C.D., Westfall, M.D., Rubinstein, L.A., Yu, J., Kinzler, K.W., Vogelstein, B., Hill, D.E. and Pietenpol, J.A. 2000. p53-dependent expression of PIG3 during proliferation, genotoxic stress, and reversible growth arrest. *Cancer Lett.* 1: 63-72.
4. Kovar, H., Jug, G., Printz, D., Bartl, S., Schmid, G. and Wesierska-Gadek, J. 2000. Characterization of distinct consecutive phases in non-genotoxic p53-induced apoptosis of Ewing tumor cells and the rate-limiting role of caspase-8. *Oncogene* 36: 4096-4107.
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CHROMOSOMAL LOCATION

Genetic locus: TP53I3 (human) mapping to 2p23.3.

SOURCE

PIG3 (10A2) is a mouse monoclonal antibody raised against recombinant PIG-3 protein of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

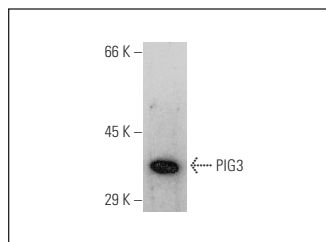
PIG3 (10A2) is recommended for detection of PIG3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for PIG3 siRNA (h): sc-36223, PIG3 shRNA Plasmid (h): sc-36223-SH and PIG3 shRNA (h) Lentiviral Particles: sc-36223-V.

Molecular Weight of PIG3: 40 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, Jurkat whole cell lysate: sc-2204 or SW480 cell lysate: sc-2219.

DATA



PIG3 (10A2): sc-65227. Western blot analysis of PIG3 expression in Jurkat whole cell lysate.

SELECT PRODUCT CITATIONS

1. Han, L., Huang, Z., Liu, Y., Ye, L., Li, D., Yao, Z., Wang, C., Zhang, Y., Yang, H., Tan, Z., Tang, J. and Yang, Z. 2021. MicroRNA-106a regulates autophagy-related cell death and EMT by targeting TP53INP1 in lung cancer with bone metastasis. *Cell Death Dis.* 12: 1037.

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 for detailed protocols and support products.