

PIG3 (C-20): sc-16327

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 2p23.3 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

1. Polyak, K., et al. 1997. A model for p53-induced apoptosis. *Nature* 389: 310-305.
2. Asher, G., et al. 1998. Regulation of p53 stability and p53-dependent apoptosis by NADH quinone oxidoreductase 1. *Proc. Natl. Acad. Sci. USA* 3: 1188-1193.

CHROMOSOMAL LOCATION

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

SOURCE

PIG3 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PIG3 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-16327 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PIG3 (C-20) is recommended for detection of PIG3 of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

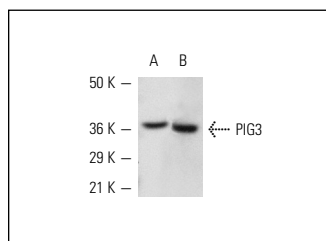
Molecular Weight of PIG3: 40 kDa.

Positive Controls: SW480 cell lysate: sc-2219, HeLa whole cell lysate: sc-2200 or A-431 whole cell lysate: sc-2201.

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.

DATA



PIG3 (C-20): sc-16327. Western blot analysis of PIG3 expression in SW480 (A) and A-431 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Hopkins-Donaldson, S., et al. 2006. p53-induced apoptosis occurs in the absence of p14^{ARF} in malignant pleural mesothelioma. *Neoplasia* 8: 551-559.
2. Chenau, J., et al. 2009. The cell line secretome, a suitable tool for investigating proteins released *in vivo* by tumors: application to the study of p53-modulated proteins secreted in lung cancer cells. *J. Proteome Res.* 8: 4579-4591.

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 or our catalog for detailed protocols and support products.



Try **PIG3 (A-5): sc-166664** or **PIG3 (10A2): sc-65227**, our highly recommended monoclonal alternatives to PIG3 (C-20).