SANTA CRUZ BIOTECHNOLOGY, INC.

PIG3 (N-20): sc-16325

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 up-regulated by p53 and may be useful for detecting transient activation of p53.

CHROMOSOMAL LOCATION

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

SOURCE

PIG3 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-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-16325 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

PIG3 (N-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), 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).

PIG3 (N-20) is also recommended for detection of PIG3 in additional species, including equine, canine, bovine and porcine.

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.

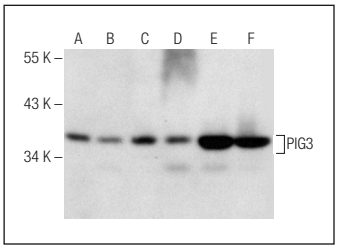
Molecular Weight of PIG3: 40 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, SW480 cell lysate: sc-2219 or A549 cell lysate: sc-2413.

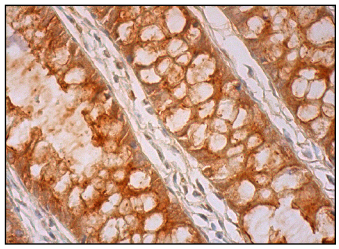
RECOMMENDED SECONDARY REAGENTS

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



PIG3 (N-20): sc-16325. Western blot analysis of PIG3 expression in HeLa (**A**), A-431 (**B**), SW480 (**C**), Caco-2 (**D**), A549 (**E**) and WI-38 (**F**) whole cell lysates.



PIG3 (N-20): sc-16325. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing nuclear and cytoplasmic staining of glandular cells.

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.