SANTA CRUZ BIOTECHNOLOGY, INC.

GSTP1 (FL-210): sc-134469

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Glutathione S-transferases (GSTs) function in the metabolic detoxification of various environmental carcinogens and lipid hydroperoxides. Members of the murine GSTP (glutathione S-transferase pi) family, termed Gstp1 and Gstp2, are linked to drug resistance and are markers for many cancers. Gstp proteins modulate cell signaling by interacting with c-Jun N-terminal kinase (JNK), and may play a protective role in the development of spontaneous tumors. Gstp has been found in substantia nigra and may be associated with reactive oxygen species-induced neurological disorders such as Parkinson's disease and may additionally protect against endothelial dysfunction induced by tobacco smoke exposure.

REFERENCES

1. Bammler, T.K., et al. 1994. Isolation and characterization of two mouse π-class glutathione S-transferase genes. Biochem. J. 298: 385-390.
2. Xu, X., et al. 1994. Two murine GSTπ genes are arranged in tandem and are differentially expressed. J. Biol. Chem. 269: 30268-30273.
3. Henderson, C.J., et al. 1998. π-class glutathione S-transferase: regulation and function. Chem. Biol. Interact. 111-112: 69-82.
4. Gate, L., et al. 2005. Influence of glutathione S-transferase π and p53 expression on tumor frequency and spectrum in mice. Int. J. Cancer 113: 29-35.
5. Ritchie, K.J., et al. 2007. Glutathione transferase π plays a critical role in the development of lung carcinogenesis following exposure to tobacco-related carcinogens and urethane. Cancer Res. 67: 9248-9257.
6. Smeyne, M., et al. 2007. GSTπ expression mediates dopaminergic neuron sensitivity in experimental parkinsonism. Proc. Natl. Acad. Sci. USA 104: 1977-1982.
7. Conklin, D.J., et al. 2009. Glutathione-S-transferase P protects against endothelial dysfunction induced by exposure to tobacco smoke. Am. J. Physiol. Heart Circ. Physiol. 296: H1586-H1597.

CHROMOSOMAL LOCATION

Genetic locus: GSTP1 (human) mapping to 11q13.2; Gstp1/Gstp2 (mouse) mapping to 19 A.

SOURCE

GSTP1 (FL-210) is a rabbit polyclonal antibody raised against amino acids 1-210 representing full length GSTP 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.

STORAGE

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

APPLICATIONS

GSTP1 (FL-210) is recommended for detection of GSTP1 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).

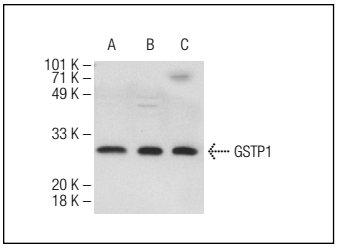
GSTP1 (FL-210) is also recommended for detection of GSTP1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for GSTP1 siRNA (h): sc-72091, GSTP1 siRNA (m): sc-72092, GSTP1 shRNA Plasmid (h): sc-72091-SH, GSTP1 shRNA Plasmid (m): sc-72092-SH, GSTP1 shRNA (h) Lentiviral Particles: sc-72091-V and GSTP1 shRNA (m) Lentiviral Particles: sc-72092-V.

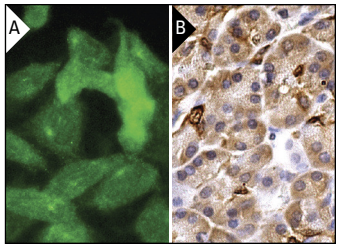
Molecular Weight of GSTP1: 23 kDa.

Positive Controls: PC-3 cell lysate: sc-2220, JAR cell lysate: sc-2276 or K-562 whole cell lysate: sc-2203.

DATA



GSTP1 (FL-210): sc-134469. Western blot analysis of GSTP1 expression in PC-3 (**A**), K-562 (**B**) and 293T (**C**) whole cell lysates.



GSTP1 (FL-210) sc-134469. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing nuclear and cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Filomeni, G., et al. 2003. Reactive oxygen species-dependent c-Jun NH_2-terminal kinase/c-Jun signaling cascade mediates neuroblastoma cell death induced by diallyl disulfide. Cancer Res. 63: 5940-5949.

RESEARCH USE

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