SANTA CRUZ BIOTECHNOLOGY, INC.

GADD 45β (H-70): sc-33172

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cell cycle progression is subject to arrest at G_1 and G_2 checkpoints in response to DNA damage, presumably to allow time for DNA repair prior to entry into S and M phase, respectively. The p53 tumor suppressor is required for one such G_1 checkpoint and functions to upregulate expression of GADD 45 and p21. GADD 45 binds both Cdks and PCNA, a protein involved in DNA replication and repair. GADD 45 stimulates DNA excision repair *in vitro* and in hibits entry of cells into S phase. Thus, it has been suggested that GADD 45 may serve as a link between the p53-dependent cell cycle checkpoint and DNA repair. GADD 45-like proteins, GADD 45β and GADD 45γ, have been shown to be induced by environmental stresses. GADD 45β and GADD 45γ are thought to induce p38/JNK activation via MEKK4 activation.

CHROMOSOMAL LOCATION

Genetic locus: GADD45B (human) mapping to 19p13.3; Gadd45b (mouse) mapping to 10 C1.

SOURCE

GADD 45β (H-70) is a rabbit polyclonal antibody raised against amino acids 91-160 mapping at the C-terminus of GADD 45β 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

GADD 45β (H-70) is recommended for detection of GADD 45β 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GADD 45β (H-70) is also recommended for detection of GADD 45β in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GADD 45β siRNA (h): sc-37416, GADD 45β siRNA (m): sc-37417, GADD 45β shRNA Plasmid (h): sc-37416-SH, GADD 45β shRNA Plasmid (m): sc-37417-SH, GADD 45β shRNA (h) Lentiviral Particles: sc-37416-V and GADD 45β shRNA (m) Lentiviral Particles: sc-37417-V.

Molecular Weight (predicted) of GADD 45β: 18 kDa.

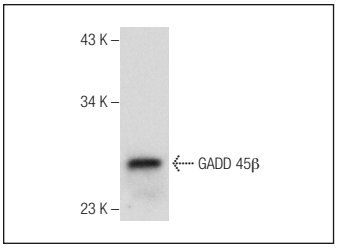
Molecular Weight (observed) of GADD 45β: 18-27 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or Jurkat whole cell lysate: sc-2204.

RESEARCH USE

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

DATA



GADD 45β (H-70): sc-33172. Western blot analysis of GADD 45β expression in Jurkat whole cell lysate.

SELECT PRODUCT CITATIONS

1. Ou, D.L., et al. 2010. Induction of DNA damage-inducible gene GADD45β contributes to sorafenib-induced apoptosis in hepatocellular carcinoma cells. Cancer Res. 70: 9309-9318.
2. Liu, B., et al. 2012. Electrical stimulation of cerebellar fastigial nucleus promotes the expression of growth arrest and DNA damage inducible gene β and motor function recovery in cerebral ischemia/reperfusion rats. Neurosci. Lett. 520: 110-114.
3. Guo, W., et al. 2013. Methylation-mediated repression of GADD45A and GADD45G expression in gastric cardia adenocarcinoma. Int. J. Cancer 133: 2043-2053.
4. Bannon, M.J., et al. 2014. A molecular profile of cocaine abuse includes the differential expression of genes that regulate transcription, chromatin, and dopamine cell phenotype. Neuropsychopharmacology 39: 2191-2199.
5. Kalpachidou, T., et al. 2015. Effects of a neonatal experience involving reward through maternal contact on the noradrenergic system of the rat prefrontal cortex. Cereb. Cortex. E-Published.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.