SANTA CRUZ BIOTECHNOLOGY, INC.

GADD 153 (6D313): sc-71136



BACKGROUND

GADD 153 has been described as a growth arrest and DNA damage-inducible gene that encodes a C/EBP-related nuclear protein. This protein has also been designated C/EBP-homologous protein (CHOP-10). GADD 153 expression is induced by a variety of cellular stresses, inducing nutrient deprivation and metabolic perturbations. GADD 153 functions to block cells in G₁ to S phase in cell cycle progression and acts by dimerizing with other C/EBP proteins to direct GADD 153 dimers away from "classical" C/EBP binding sites, recognizing instead unique "nonclassical" sites. Thus GADD 153 acts as a negative modulator of C/EBP-like proteins in certain terminally differentiated cells, similar to the regulatory function of Id on the activity of MyoD and MyoDrelated proteins involved in the development of muscle cells.

REFERENCES

- 1. Sherr, C.J. 1994. G1 phase progression: cycling on cue. Cell 79: 551-555.
- 2. Hunter, T., et al. 1994. Cyclins and cancer II: cyclin D and Cdk inhibitors come of age. Cell 79: 573-582.
- Ron, D. 1994. Inducible growth arrest: new mechanistic insights. Proc. Natl. Acad. Sci. USA 91: 1985-1986.

CHROMOSOMAL LOCATION

Genetic locus: DDIT3 (human) mapping to 12q13.3; Ddit3 (mouse) mapping to 10 D3.

SOURCE

GADD 153 (6D313) is a mouse monoclonal antibody raised against GADD 153 of mouse origin.

PRODUCT

Each vial contains 200 μg lgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

GADD 153 (6D313) is recommended for detection of GADD 153 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 immunohistochemistry (including paraffinembedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for GADD 153 siRNA (h): sc-35437, GADD 153 siRNA (m): sc-35438, GADD 153 siRNA (r): sc-156118, GADD 153 shRNA Plasmid (h): sc-35437-SH, GADD 153 shRNA Plasmid (m): sc-35438-SH, GADD 153 shRNA Plasmid (r): sc-156118-SH, GADD 153 shRNA (h) Lentiviral Particles: sc-35437-V, GADD 153 shRNA (m) Lentiviral Particles: sc-35437-V, GADD 153 shRNA (m) Lentiviral Particles: sc-35438-V and GADD 153 shRNA (r) Lentiviral Particles: sc-156118-V.

Molecular Weight of GADD 153: 30 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, MCF7 whole cell lysate: sc-2206 or TK-1 whole cell lysate: sc-364798.

STORAGE

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

DATA





GADD 153 (6D313): sc-71136. Western blot analysis of GADD 153 expression in PC-12 (A), MCF7 (B) and TK-1 (C) whole cell lysates.

GADD 153 (6D313): sc-71136. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Xiong, F.Y., et al. 2018. Melatonin ameliorates myocardial apoptosis by suppressing endoplasmic reticulum stress in rats with long-term diabetic cardiomyopathy. Mol. Med. Rep. 17: 374-381.
- Yi, H., et al. 2019. Isosteviol protects free fatty acid- and high fat dietinduced hepatic injury via modulating PKC-β/p66Shc/Ros and ER stress pathways. Antioxid. Redox Signal. 30: 1949-1968.
- Huang, W.G., et al. 2020. Endoplasmic reticulum stress increases multidrug-resistance protein 2 expression and mitigates acute liver injury. Curr. Mol. Med. 20: 548-557.
- 4. Ullah, H.M.A., et al. 2021. Nogo-A is critical for pro-inflammatory gene regulation in myocytes and macrophages. Cells 10: 282.
- Dos Anjos Cordeiro, J.M., et al. 2022. Maternal hypothyroidism causes oxidative stress and endoplasmic reticulum stress in the maternal-fetal interface of rats. Free Radic. Biol. Med. 191: 24-39.
- Marafon, B.B., et al. 2023. Genetic ablation of Toll-like Receptor 4 seems to activate the apoptosis pathway in the skeletal muscle of mice after acute physical exercise. Cell Biochem. Funct. 41: 86-97.
- 7. Ben Salem, I., et al. 2023. Effects of Dichlorvos on cardiac cells: toxicity and molecular mechanism of action. Chemosphere 330: 138714.
- Santos, L.C., et al. 2024. Kisspeptin-10 improves testicular redox status but does not alter the unfolded protein response (UPR) that is downregulated by hypothyroidism in a rat model. Int. J. Mol. Sci. 25: 1514.
- Dos Anjos Cordeiro, J.M., et al. 2024. Manganese porphyrin-based treatment improves fetal-placental development and protects against oxidative damage and NLRP3 inflammasome activation in a rat maternal hypothyroidism model. Redox Biol. 74: 103238.

RESEARCH USE

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