

GADD 153 (H-5): sc-166682

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 Myo D and Myo D-related 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.
3. Ron, D. 1994. Inducible growth arrest: new mechanistic insights. *Proc. Natl. Acad. Sci. USA* 91: 1985-1986.
4. Smith, M.L., et al. 1994. Interaction of the p53-regulated protein GADD 45 with proliferating cell nuclear antigen. *Science* 266: 1376-1380.

CHROMOSOMAL LOCATION

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

SOURCE

GADD 153 (H-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 140-168 at the C-terminus of GADD 153 of human origin.

PRODUCT

Each vial contains 200 µg IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GADD 153 (H-5) is available conjugated to agarose (sc-166682 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166682 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166682 PE), fluorescein (sc-166682 FITC), Alexa Fluor[®] 488 (sc-166682 AF488), Alexa Fluor[®] 546 (sc-166682 AF546), Alexa Fluor[®] 594 (sc-166682 AF594) or Alexa Fluor[®] 647 (sc-166682 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-166682 AF680) or Alexa Fluor[®] 790 (sc-166682 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166682 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA

RESEARCH USE

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

APPLICATIONS

GADD 153 (H-5) is recommended for detection of GADD 153 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

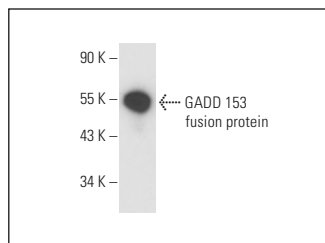
GADD 153 (H-5) is also recommended for detection of GADD 153 in additional species, including equine, canine, bovine and porcine.

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-35438-V and GADD 153 shRNA (r) Lentiviral Particles: sc-156118-V.

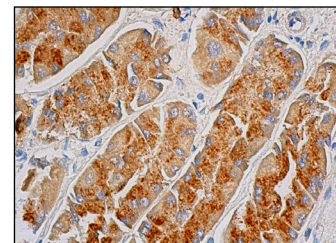
Molecular Weight of GADD 153: 30 kDa.

Positive Controls: RAW 264.7 + LPS/PMA cell lysate: sc-2212 or RAW 264.7 whole cell lysate: sc-2211.

DATA



GADD 153 (H-5): sc-166682. Western blot analysis of full length mouse recombinant GADD 153 fusion protein.



GADD 153 (H-5): sc-166682. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Huang, P., et al. 2011. The apoptotic effect of oral administration of microcystin-RR on mice liver. *Environ. Toxicol.* 26: 443-452.
2. Guo, X., et al. 2019. Hepatitis C virus infection induces endoplasmic reticulum stress and apoptosis in human fetal liver stem cells. *J. Pathol.* 248: 155-163.
3. Li, Y., et al. 2020. Hes1 knockdown exacerbates ischemic stroke following tMCAO by increasing ER stress-dependent apoptosis via the PERK/eIF2 α /ATF4/CHOP signaling pathway. *Neurosci. Bull.* 36: 134-142.
4. Nasiri-Ansari, N., et al. 2021. Empagliflozin attenuates non-alcoholic fatty liver disease (NAFLD) in high fat diet fed ApoE^{-/-} mice by activating autophagy and reducing ER stress and Apoptosis. *Int. J. Mol. Sci.* 22: 818.

STORAGE

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