

# GADD 34 (D-8): sc-46661

## BACKGROUND

It is well established that cell cycle progression is subject to arrest at G<sub>1</sub> and G<sub>2</sub> 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<sub>1</sub> checkpoint and functions to upregulate expression of GADD 45 and the mitotic inhibitory protein p21. GADD 45 has been shown to stimulate DNA excision repair *in vitro* and to inhibit entry of cells into S phase, and it apparently acts in concert with GADD 153 in inducing growth arrest. A related DNA-damage inducible gene, GADD 34 (also designated MyD116) has been shown to synergize with GADD 45 or GADD 153 in suppressing cell growth. PEG-3 (progression elevated gene-3) shares significant homology with GADD 34 and is inducible by DNA damage. PEG-3 expression has been shown to be elevated in cells displaying a progressed-transformed phenotype.

## CHROMOSOMAL LOCATION

Genetic locus: PPP1R15A (human) mapping to 19q13.33.

## SOURCE

GADD 34 (D-8) is a mouse monoclonal antibody raised against amino acids 483-674 of GADD 34 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

GADD 34 (D-8) is recommended for detection of GADD 34 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:10000), 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).

Suitable for use as control antibody for GADD 34 siRNA (h): sc-37414, GADD 34 shRNA Plasmid (h): sc-37414-SH and GADD 34 shRNA (h) Lentiviral Particles: sc-37414-V.

Molecular Weight of GADD 34: 73 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HEK293 whole cell lysate: sc-45136 or U-937 cell lysate: sc-2239.

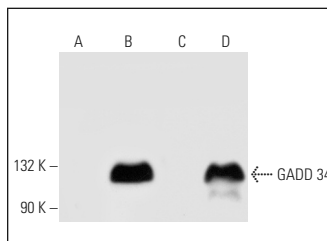
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

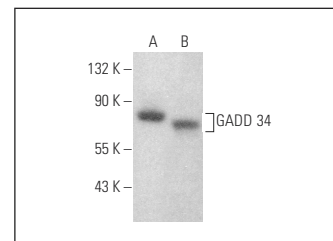
## STORAGE

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

## DATA



Western blot analysis of control (A, C) and GADD 34 transfected (B, D) COS cells. Antibodies tested include GADD 34 (D-8): sc-46661 (A, B) and GADD 34 (H-193): sc-8327 (C, D).




GADD 34 (D-8): sc-46661. Western blot analysis of GADD 34 expression in HeLa (A) and HEK293 (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Tardito, S., et al. 2009. The thioxotriazole copper(II) complex A0 induces endoplasmic reticulum stress and paraptotic death in human cancer cells. *J. Biol. Chem.* 284: 24306-24319.
- Tardito, S., et al. 2011. Copper binding agents acting as copper ionophores lead to caspase inhibition and paraptotic cell death in human cancer cells. *J. Am. Chem. Soc.* 133: 6235-6242.
- Saletta, F., et al. 2011. Cellular iron depletion and the mechanisms involved in the iron-dependent regulation of the growth arrest and DNA damage family of genes. *J. Biol. Chem.* 286: 35396-35406.
- Yao, J., et al. 2020. The attenuating effect of the intraovarian bone morphogenetic protein 4 on age-related endoplasmic reticulum stress in chicken follicular cells. *Oxid. Med. Cell. Longev.* 2020: 4175613.
- Gain, C., et al. 2021. Identification of two novel thiophene analogues as inducers of autophagy mediated cell death in breast cancer cells. *Bioorg. Med. Chem.* 37: 116112.
- Zhu, Y., et al. 2021. Paeoniflorin effect of Schwann cell-derived exosomes ameliorates dorsal root ganglion neurons apoptosis through IRE1α pathway. *Evid. Based Complement. Alternat. Med.* 2021: 6079305.
- Grillone, K., et al. 2022. The new microtubule-targeting agent SIX2G induces immunogenic cell death in multiple myeloma. *Int. J. Mol. Sci.* 23: 10222.

## RESEARCH USE

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



See **GADD 34 (B-10): sc-373815** for GADD 34 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.