

# GADD 34 (B-10): sc-373815

## 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 (B-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 633-660 at the C-terminus of GADD 34 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GADD 34 (B-10) is available conjugated to agarose (sc-373815 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373815 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373815 PE), fluorescein (sc-373815 FITC), Alexa Fluor<sup>®</sup> 488 (sc-373815 AF488), Alexa Fluor<sup>®</sup> 546 (sc-373815 AF546), Alexa Fluor<sup>®</sup> 594 (sc-373815 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-373815 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-373815 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-373815 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

GADD 34 (B-10) is recommended for detection of GADD 34 of 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) 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.

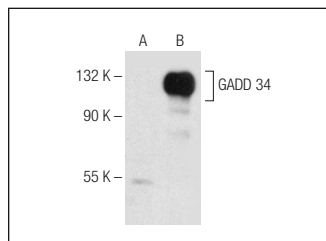
Molecular Weight of GADD 34: 73 kDa.

Positive Controls: U-937 cell lysate: sc-2239 or GADD 34 (h): 293T Lysate: sc-174859.

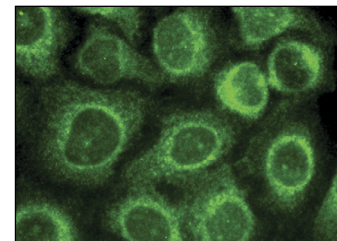
## STORAGE

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

## DATA



GADD 34 (B-10): sc-373815. Western blot analysis of GADD 34 expression in non-transfected: sc-117752 (A) and human GADD 34 transfected: sc-174859 (B) 293T whole cell lysates.



GADD 34 (B-10): sc-373815. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Holczer, M., et al. 2018. Epigallocatechin-3-gallate (EGCG) promotes autophagy-dependent survival via influencing the balance of mTOR-AMPK pathways upon endoplasmic reticulum stress. *Oxid. Med. Cell. Longev.* 2018: 6721530.
- Arasi, F.P., et al. 2019. A2a adenosine receptor agonist improves endoplasmic reticulum stress in MIN6 cell line through protein kinase A/protein kinase B/cyclic adenosine monophosphate response element-binding protein/and growth arrest and DNA-damage-inducible 34/eukaryotic initiation factor 2α pathways. *J. Cell. Physiol.* 234: 10500-10511.
- Santiago, J., et al. 2019. First insights on the presence of the unfolded protein response in human spermatozoa. *Int. J. Mol. Sci.* 20: 5518.
- Borkham-Kamphorst, E., et al. 2020. Chronic carbon tetrachloride applications induced hepatocyte apoptosis in lipocalin 2 null mice through endoplasmic reticulum stress and unfolded protein response. *Int. J. Mol. Sci.* 21: 5230.
- Rozés-Salvador, V., et al. 2020. Fine-tuning the TGFβ signaling pathway by SARA during neuronal development. *Front. Cell Dev. Biol.* 8: 550267.
- Bahamondes Lorca, V.A., et al. 2021. UVB-induced eIF2α phosphorylation in keratinocytes depend on decreased ATF4, GADD34 and CREP expression levels. *Life Sci.* 286: 120044.
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- Silva, J.V., et al. 2022. Effects of age and lifelong moderate-intensity exercise training on rats' testicular function. *Int. J. Mol. Sci.* 23: 11619.

## RESEARCH USE

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