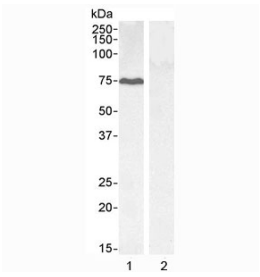
GADD34 Antibody / Stress Response Protein Antibody (R33103)

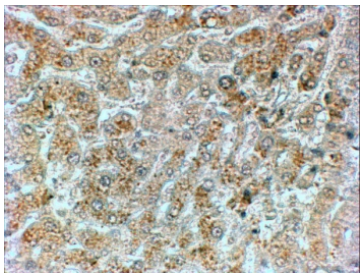
Catalog No.	Formulation	Size
R33103-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

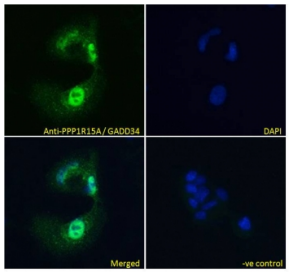
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	23645
Localization	Nuclear, cytoplasmic
Applications	Western blot: 0.1-0.3ug/ml Immunohistochemistry (FFPE): 2-4ug/ml ICC/IF: 10ug/ml FACS: 10ug/ml ELISA (peptide) LOD: 1:128000
Limitations	This GADD34 Antibody / Stress Response Protein Antibody is available for research use only.



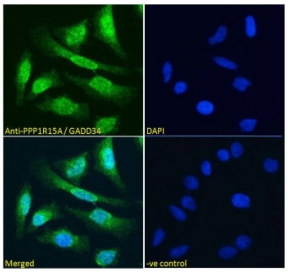
GADD34 Antibody Human Liver Cancer Cell WB. Western blot analysis of GADD34 expression in human HEPG2 and KLY cell lysates. Lane 1: HEPG2 cell lysate. Lane 2: KLY negative control cell lysate. Proteins were detected using GADD34 antibody at 0.1 ug/ml. A distinct band is observed at approximately 73 kDa in HEPG2 cells, consistent with the predicted molecular weight of GADD34, while no corresponding band is detected in the negative control lysate. GADD34 may also be detected at higher apparent molecular weights of up to approximately 110 kDa due to post-translational modification or altered protein migration. This result demonstrates the specificity of the GADD34 Antibody / Stress Response Protein Antibody for detecting endogenous GADD34 by Western blot.



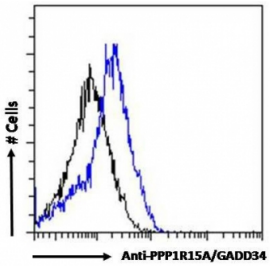
GADD34 Antibody Human Liver IHC. Immunohistochemical staining of FFPE human liver using GADD34 antibody at 2 ug/ml following heat-induced epitope retrieval in pH6 citrate buffer. Detection was performed using an HRP-based staining system. GADD34 immunoreactivity is observed predominantly within hepatocytes, with diffuse cytoplasmic staining and variable staining intensity throughout the liver parenchyma, consistent with the protein's role in regulating cellular stress responses and recovery from translational inhibition. This staining demonstrates that the GADD34 Antibody / Stress Response Protein Antibody is suitable for immunohistochemical detection of endogenous GADD34 in formalin-fixed, paraffin-embedded human tissue.



GADD34 Antibody Human Liver Cancer Cell IF. Immunofluorescent staining of fixed and permeabilized human HepG2 cells using GADD34 antibody at 10 ug/ml (green) with DAPI nuclear counterstain (blue). GADD34 immunoreactivity is detected predominantly within the cytoplasm with additional perinuclear staining, consistent with its role in regulating protein phosphatase 1-mediated dephosphorylation of eIF2alpha during the integrated stress response. The negative control shows minimal background fluorescence, supporting staining specificity. This result demonstrates that the GADD34 Antibody / Stress Response Protein Antibody is suitable for immunofluorescent detection of endogenous GADD34 in cultured human cells.



GADD34 Antibody Human Cervical Cancer Cell IF. Immunofluorescent staining of fixed and permeabilized human HeLa cells using GADD34 antibody at 10 ug/ml (green) with DAPI nuclear counterstain (blue). GADD34 immunoreactivity is detected predominantly within the cytoplasm with prominent perinuclear staining, consistent with its function as a stress-inducible regulator of protein phosphatase 1 and eIF2alpha signaling during the integrated stress response. The negative control exhibits minimal background fluorescence, supporting the specificity of the staining pattern. This result demonstrates that the GADD34 Antibody / Stress Response Protein Antibody is suitable for immunofluorescent detection and subcellular localization of endogenous GADD34 in cultured human cells.



GADD34 Antibody Human Liver Cancer Cell FACS. Flow cytometric analysis of fixed and permeabilized human HepG2 cells stained with GADD34 antibody at 10 ug/ml (blue) or naÃ¯ve goat Ig as the isotype control (black). GADD34 antibody staining produces a clear rightward shift in fluorescence intensity compared with the control population, demonstrating specific detection of endogenous GADD34 expression. This result supports the use of the GADD34 Antibody / Stress Response Protein Antibody for intracellular flow cytometry applications and evaluation of GADD34 expression in cultured human cells.

Description

GADD34 Antibody / Stress Response Protein Antibody recognizes GADD34, a stress-inducible regulatory protein encoded by the PPP1R15A gene that plays a central role in restoring protein synthesis following cellular stress. GADD34 is rapidly induced by DNA damage, endoplasmic reticulum stress, nutrient deprivation, viral infection, oxidative stress, and other adverse cellular conditions. Acting as a regulatory subunit of protein phosphatase 1, GADD34 directs the phosphatase toward phosphorylated eukaryotic translation initiation factor 2 alpha (eIF2alpha), promoting its dephosphorylation and allowing recovery of global protein translation after activation of the integrated stress response. A GADD34 Antibody is therefore widely used to investigate stress signaling, protein synthesis regulation, and cellular adaptation to environmental challenges.

GADD34 functions as a critical negative feedback regulator of the integrated stress response by limiting prolonged phosphorylation of eIF2alpha. During cellular stress, kinases including PERK, PKR, GCN2, and HRI phosphorylate eIF2alpha, reducing global protein synthesis while selectively promoting translation of stress-responsive genes such as

ATF4. Induction of GADD34 subsequently recruits protein phosphatase 1 to phosphorylated eIF2alpha, reversing translational repression and helping restore normal cellular function once stress subsides. Researchers frequently analyze GADD34 alongside ATF4, CHOP, PERK, eIF2alpha, and protein phosphatase 1 to better understand endoplasmic reticulum stress, unfolded protein response signaling, and translational control. An GADD34 Antibody provides an important tool for studying these highly coordinated regulatory pathways.

Altered GADD34 expression has been implicated in numerous diseases, including cancer, neurodegenerative disorders, viral infections, metabolic disease, inflammatory conditions, and ischemic injury. Dysregulation of GADD34-mediated eIF2alpha dephosphorylation can influence apoptosis, autophagy, immune responses, protein homeostasis, and sensitivity to therapeutic agents. Because many viruses manipulate GADD34 signaling to restore host protein synthesis and facilitate viral replication, the protein has also become an important target in infectious disease research. Consequently, a GADD34 Antibody has become a valuable reagent for investigations spanning oncology, neuroscience, immunology, virology, and cell signaling.

GADD34 is routinely analyzed using Western blot, immunohistochemistry, immunofluorescence, immunoprecipitation, and flow cytometry to evaluate protein expression, intracellular localization, and regulation during cellular stress. When combined with antibodies recognizing eIF2alpha, phospho-eIF2alpha, ATF4, or CHOP, investigators can obtain a comprehensive view of integrated stress response signaling. NSJ Bioreagents provides carefully validated antibodies to support these applications across multiple experimental systems. A GADD34 Antibody / Stress Response Protein Antibody provides researchers with a reliable reagent for investigating endoplasmic reticulum stress, integrated stress response signaling, translational control, protein phosphatase regulation, and mechanisms of cellular adaptation.

Explore our Signal Transduction Antibodies page to discover validated antibodies for GADD34 and other proteins involved in integrated stress response signaling, protein phosphatase regulation, eIF2alpha signaling, and cellular adaptation.

Application Notes

Optimal dilution of the GADD34 Antibody / Stress Response Protein Antibody should be determined by the researcher.

Immunogen

Amino acids AAALDLSGRRG were used as the immunogen for this GADD34 antibody.

Storage

Aliquot and store the GADD34 antibody at -20oC.

Alternate Names

GADD34 antibody, Stress Response Protein antibody, PPP1R15A antibody, Growth Arrest and DNA Damage Inducible Protein 34 antibody

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