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Product Information

Anti-GADD153
produced in rabbit, affinity isolated antibody

Catalog Number **G6916**

Synonym: Anti-CHOP-10

Product Description

Anti-GADD153 is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acids 153-169 of human GADD153 with N-terminal lysine added, conjugated to keyhole limpet hemocyanin (KLH). The corresponding sequence in mouse and rat differs by 2 amino acids. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-GADD153 specifically recognizes human GADD153 by immunoblotting (29 kDa) and immunocytochemistry. Staining of GADD153 by immunoblotting is inhibited by the immunizing peptide.

GADD153/CHOP10 (Growth Arrest and DNA Damage Inducible Protein 153, C/EBP Homology Protein) is a basic region leucine zipper transcription factor, devoid of DNA binding site. Its apparent molecular mass is 29 kDa (or 19 kDa calculated). GADD153 is capable of heterodimerizing with members of the CCAAT/enhancer binding protein (C/EBP) family of transcription factors. It is both an activating and a repressing factor that is markedly induced in response to many signals such as growth arrest, DNA damage, calcium ionophore, nutrient deprivation, hypoxia, hyperoxia, hyperosmosis, and endoplasmic reticulum stress. Heterodimerization of GADD153 with C/EBPβ inhibits the function of the latter by preventing its binding to DNA sequences specific for the homodimer. Binding of the heterodimer to another subset of genes may stimulate their transcription. Heterodimerization of GADD153 with members of certain non-C/EBP subfamilies, such as ATF3[1] and Jun/Fos, is also possible.

Heterotopic expression of GADD153 induces growth arrest in fibroblasts, inhibits adipocyte differentiation, and may be involved in apoptosis *in vitro*.[2-6] GADD153 is also involved in apoptosis in lungs of mice exposed to hyperoxia.[7] It is up regulated during certain stages of erythroid differentiation. GADD153 enhances differentiation of erythroid cells in which it may bind several nuclear proteins as well as the FTE/S3a ribosomal protein.[5,8] Regulation of GADD153 by phosphorylation via p38 MAPK is possible. A form of human myxoid liposarcoma is characterized by a chromosomal translocation that involves GADD153 and FUS/TLS.[9]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 15 mM sodium azide.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at –20 °C. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working dilution of 1:200-1:400 is determined using a whole extract of HEK-293 over-expressing GADD153 and a chemiluminescent detection system.

Immunocytochemistry: a working dilution of 5-10 ug/ml is determined using Hela human cells

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working dilutions by titration test.

References

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