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KD-Validated Anti-DNA Damage Inducible Transcript 3 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1328

Specification

KD-Validated Anti-DNA Damage Inducible Transcript 3 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	P35638
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 19 kDa; observed, 27 kDa KDa**
Gene Name	**DDIT3**
Aliases	**DDIT3; DNA Damage Inducible Transcript 3; GADD153; CHOP10; CHOP; C/EBP Zeta; Growth Arrest And DNA Damage-Inducible Protein GADD153; CCAAT/Enhancer-Binding Protein Homologous Protein; DNA Damage-Inducible Transcript 3 Protein; C/EBP-Homologous Protein 10; Alternative DDIT3 Protein; AltDDIT3; CHOP-10; Growth Arrest And DNA-Damage-Inducible Gene; DDIT3 Upstream Open Reading Frame Protein; DNA-Damage-Inducible Transcript 3; C/EBP Homologous Protein; C/EBP-Homologous Protein; C/EBPzeta; DDIT-3; CEBPZ**
Immunogen	**A synthesized peptide derived from human DDIT3**

KD-Validated Anti-DNA Damage Inducible Transcript 3 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**1649**

Other Names
DNA damage-inducible transcript 3 protein, DDIT-3, C/EBP zeta, C/EBP-homologous protein, CHOP, C/EBP-homologous protein 10, CHOP-10, CCAAT/enhancer-binding protein homologous protein, Growth arrest and DNA damage-inducible protein GADD153, DDIT3, CHOP, CHOP10, GADD153

KD-Validated Anti-DNA Damage Inducible Transcript 3 Rabbit Monoclonal Antibody - Protein Information

Name DDIT3

Synonyms CHOP, CHOP10, GADD153

Function

Multifunctional transcription factor in endoplasmic reticulum (ER) stress response (PubMed:15322075, PubMed:15775988, PubMed:19672300). Plays an essential role in the response to a wide variety of cell stresses and induces cell cycle arrest and apoptosis in response to ER stress (PubMed:15322075, PubMed:15775988). Plays a dual role both as an inhibitor of CCAAT/enhancer-binding protein (C/EBP) function and as an activator of other genes (By similarity). Acts as a dominant-negative regulator of C/EBP-induced transcription: dimerizes with members of the C/EBP family, impairs their association with C/EBP binding sites in the promoter regions, and inhibits the expression of C/EBP regulated genes (By similarity). Positively regulates the transcription of TRIB3, IL6, IL8, IL23, TNFRSF10B/DR5, PPP1R15A/GADD34, BBC3/PUMA, BCL2L11/BIM and ERO1L (PubMed:15775988, PubMed:17709599, PubMed:20876114, PubMed:22761832). Negatively regulates; expression of BCL2 and MYOD1, ATF4-dependent transcriptional activation of asparagine synthetase (ASNS), CEBPA-dependent transcriptional activation of hepcidin (HAMP) and CEBPB-mediated expression of peroxisome proliferator-activated receptor gamma (PPARG) (PubMed:18940792, PubMed:19672300, PubMed:20829347). Together with ATF4, mediates ER- mediated cell death by promoting expression of genes involved in cellular amino acid metabolic processes, mRNA translation and the unfolded protein response (UPR) in response to ER stress (By similarity). Inhibits the canonical Wnt signaling pathway by binding to TCF7L2/TCF4, impairing its DNA-binding properties and repressing its transcriptional activity (PubMed:16434966). Plays a regulatory role in the inflammatory response through the induction of caspase-11 (CASP4/CASP11) which induces the activation of caspase-1 (CASP1) and both these caspases increase the activation of pro-IL1B to mature IL1B which is involved in the inflammatory response (By similarity). Acts as a major regulator of postnatal neovascularization through regulation of endothelial nitric oxide synthase (NOS3)-related signaling (By similarity).

Cellular Location
Cytoplasm. Nucleus Note=Present in the cytoplasm under non-stressed conditions and ER stress leads to its nuclear accumulation

KD-Validated Anti-DNA Damage Inducible Transcript 3 Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-DNA Damage Inducible Transcript 3 Rabbit Monoclonal Antibody - Images

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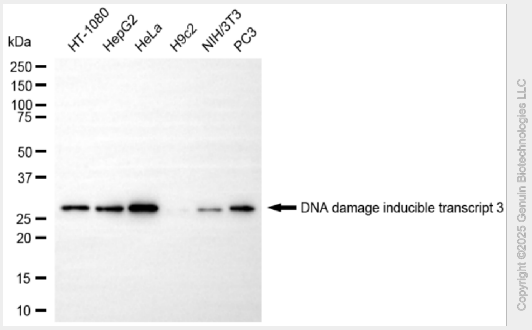
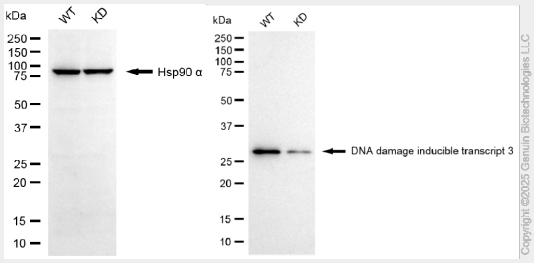
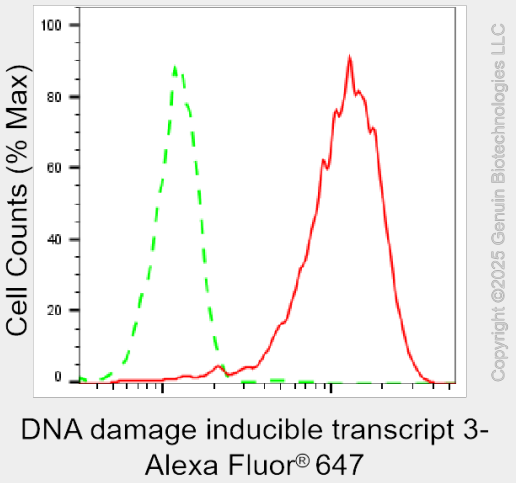


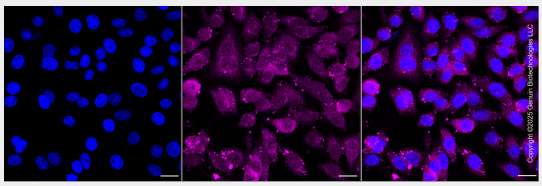
Western blotting analysis using anti-DNA damage inducible transcript 3 antibody (Cat#AGI1328). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-DNA damage inducible transcript 3 antibody (Cat#AGI1328, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-DNA damage inducible transcript 3 antibody (Cat#AGI1328). DNA damage inducible transcript 3 expression in wild-type (WT) and DNA damage inducible transcript 3 (DDIT3) knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-DNA damage inducible transcript 3 antibody (Cat#AGI1328, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of DNA damage inducible transcript 3 expression in HepG2 cells using anti-DNA damage inducible transcript 3c antibody (Cat#AGI1328, 1:2,000). Green, isotype control; red, DNA damage inducible transcript 3.



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Immunocytochemical staining of HepG2 cells with anti-DNA damage inducible transcript 3 antibody (Cat#AGI1328, 1:1,000). Nuclei were stained blue with DAPI; DNA damage inducible transcript 3 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar, 20 µm.