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

Rabbit monoclonal antibody
Catalog # AGI1328

Product Information

Application	WB, FC, ICC
Primary Accession	P35638
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	25GB2955
Calculated MW	19175
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

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

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

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