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DDIT3 (13J11) Rabbit Monoclonal Antibody

Catalog # AP93293

Product Information

Application	WB, IHC-P, IF
Primary Accession	P35638
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Monoclonal
Calculated MW	19175

Additional Information

Gene ID	1649
Other Names	C/EBP zeta; CHOP; CHOP-10; DDIT3;
Dilution	WB~~1:1000 IHC-P~~N/A IF~~1:50~200
Format	Supplied in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% New type preservative N and 0.05% BSA.
Storage Conditions	-20℃

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).

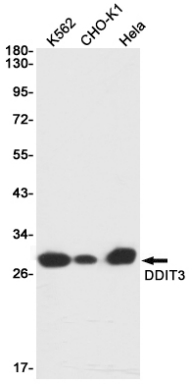
Cellular Location

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

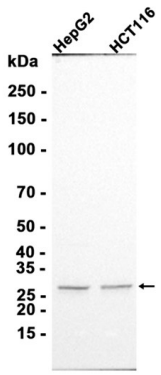
Background

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:22761832, PubMed:20876114). 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).

Images



Western blot detection of DDIT3 in K562,CHO-K1,Hela cell lysates using DDIT3 antibody(1:1000 diluted).



Western blot analysis of extracts from HepG2,HCT116 cells using AP93293 at 1:1000.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.