DDIT3 Antibody (C-Term A135) Blocking Peptide

PRODUCT OVERVIEW

Product Name	DDIT3, Blocking Peptide
Full Product Name	DDIT3 Antibody (C-term A135) Blocking peptide
Product Gene Name	DDIT3 blocking peptide
Product Synonym Gene Name	CHOP; CHOP10; GADD153
Product Synonym 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
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 1 mg/ml.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	DDIT3 peptide (MBS9218752) is used for blocking the activity of DDIT3 antibody (MBS9209135)
Molecular Weight	21,700 Da
OMIM	126337
Cellular Location	Cytoplasm. Nucleus. Note: Present in the cytoplasm under non-stressed conditions and ER stress leads to its nuclear accumulation
Related Product Information for DDIT3 blocking peptide	Multifunctional transcription factor in ER stress response. 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. Plays a dual role both as an inhibitor of CCAAT/enhancer-binding protein (C/EBP) function and as an activator of other genes. 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. Positively regulates the transcription of TRIB3, IL6, IL8, IL23, TNFRSF10B/DR5, PPP1R15A/GADD34, BBC3/PUMA, BCL2L11/BIM and ERO1L. 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). Inhibits the canonical Wnt signaling pathway by binding to TCF7L2/TCF4, impairing its DNA-binding properties and repressing its transcriptional activity. 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.
Other Notes	Small volumes of DDIT3 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for DDIT3 purchase	MBS9218752 is a blocking peptide targeting DDIT3. Also known as DDIT3 Antibody (C-term A135) Blocking peptide.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for DDIT3. It may not necessarily be applicable to this product.

NCBI GI #	544022
NCBI GeneID	1649
NCBI Accession #	P35638.1
UniProt Primary Accession #	P35638

UniProt Secondary Accession #	F8VS99
UniProt Related Accession #	P35638
NCBI Official Full Name	DNA damage-inducible transcript 3 protein
NCBI Official Synonym Full Names	DNA damage inducible transcript 3
NCBI Official Symbol	DDIT3
NCBI Official Synonym Symbols	CHOP; CEBPZ; CHOP10; CHOP-10; GADD153
UniProt Protein Name	DNA damage-inducible transcript 3 protein
UniProt Synonym Protein Names	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
Protein Family	DNA damage-inducible transcript 3 protein
UniProt Gene Name	DDIT3
UniProt Synonym Gene Names	CHOP; CHOP10; GADD153; DDIT-3; CHOP; CHOP-10
UniProt Entry Name	DDIT3_HUMAN
NCBI Protein Information	DNA damage-inducible transcript 3 protein
NCBI Summary for DDIT3	This gene encodes a member of the CCAAT/enhancer-binding protein (C/EBP) family of transcription factors. The protein functions as a dominant-negative inhibitor by forming heterodimers with other C/EBP members, such as C/EBP and LAP (liver activator protein), and preventing their DNA binding activity. The protein is implicated in adipogenesis and erythropoiesis, is activated by endoplasmic reticulum stress, and promotes apoptosis. Fusion of this gene and FUS on chromosome 16 or EWSR1 on chromosome 22 induced by translocation generates chimeric proteins in myxoid liposarcomas or Ewing sarcoma. Multiple alternatively spliced transcript variants encoding two isoforms with different length have been identified. [provided by RefSeq, Aug 2010]
UniProt Comments for DDIT3	CHOP: a transcriptional-regulatory protein of the bZIP family. Inhibits the DNA-binding activity of C/EBP and LAP by forming heterodimers that cannot bind DNA. May play an important role in melanoma progression. CK2-mediated phosphorylation inhibits its transcriptional activity. Up-regulates IL-6 transcription by trapping negative regulating NF-IL6 isoform. Protein type: Oncoprotein; Transcription factor; DNA-binding; Autophagy Chromosomal Location of Human Ortholog: 12q13.1-q13.2 Cellular Component: cytosol; nucleoplasm; nucleus Molecular Function: cAMP response element binding protein binding; DNA binding; leucine zipper domain binding; protein binding; protein heterodimerization activity; protein homodimerization activity; transcription corepressor activity; transcription factor activity; transcription factor binding Biological Process: cell cycle arrest; cell redox homeostasis; inhibition of CREB transcription factor; mRNA transcription from RNA polymerase II promoter; negative regulation of protein kinase B signaling cascade; negative regulation of transcription factor activity; negative regulation of transcription from RNA polymerase II promoter; negative regulation of transcription, DNA-dependent; positive regulation of interleukin-8 production; positive regulation of neuron apoptosis; positive regulation of transcription from RNA polymerase II promoter; positive regulation of transcription, DNA-dependent; proteasomal ubiquitin-dependent protein catabolic process; regulation of transcription in response to stress; regulation of transcription, DNA-dependent; response to DNA damage stimulus; response to unfolded protein Disease: Myxoid Liposarcoma
Research Articles on DDIT3	**1.** Combined administration inhibited the cells most potently and time-dependently, decreased the expression of HO-1, and significantly increased the expression of ATF4, CHOP, and Ire-1 proteins expression levels

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