

**DDIT3 / CHOP Antibody (clone 3H7)**  
**Mouse Monoclonal Antibody**  
**Catalog # ALS16970****Specification**

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**DDIT3 / CHOP Antibody (clone 3H7) - Product Information**

Application	IHC, WB
Primary Accession	<a href="#">P35638</a>
Other Accession	<a href="#">1649</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	19175

**DDIT3 / CHOP Antibody (clone 3H7) - Additional Information****Gene ID** 1649**Other Names**

DDIT3, CHOP10, DDIT-3, CHOP, GADD153, C/EBP zeta, C/EBP-homologous protein, C/EBP-homologous protein 10, CHOP-10

**Target/Specificity**

Human DDIT3 / CHOP

**Reconstitution & Storage**

PBS, pH 7.3, 1% BSA, 50% glycerol, 0.02% sodium azide. Store at -20°C. Minimize freezing and thawing.

**Precautions**

DDIT3 / CHOP Antibody (clone 3H7) is for research use only and not for use in diagnostic or therapeutic procedures.

**DDIT3 / CHOP Antibody (clone 3H7) - Protein Information****Name** DDIT3**Synonyms** CHOP, CHOP10, GADD153**Function**

Multifunctional transcription factor in endoplasmic reticulum (ER) stress response (PubMed: <a href="http://www.uniprot.org/citations/15322075" target="\_blank">15322075</a>, PubMed: <a href="http://www.uniprot.org/citations/15775988" target="\_blank">15775988</a>, PubMed: <a href="http://www.uniprot.org/citations/19672300" target="\_blank">19672300</a>). 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: <a href="http://www.uniprot.org/citations/15322075" target="\_blank">15322075</a>, PubMed: <a href="http://www.uniprot.org/citations/15775988" target="\_blank">15775988</a>).

target="\_blank">15775988</a>). 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:<a href="http://www.uniprot.org/citations/15775988" target="\_blank">15775988</a>, PubMed:<a href="http://www.uniprot.org/citations/17709599" target="\_blank">17709599</a>, PubMed:<a href="http://www.uniprot.org/citations/22761832" target="\_blank">22761832</a>, PubMed:<a href="http://www.uniprot.org/citations/20876114" target="\_blank">20876114</a>). 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:<a href="http://www.uniprot.org/citations/18940792" target="\_blank">18940792</a>, PubMed:<a href="http://www.uniprot.org/citations/19672300" target="\_blank">19672300</a>, PubMed:<a href="http://www.uniprot.org/citations/20829347" target="\_blank">20829347</a>). 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:<a href="http://www.uniprot.org/citations/16434966" target="\_blank">16434966</a>). 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**

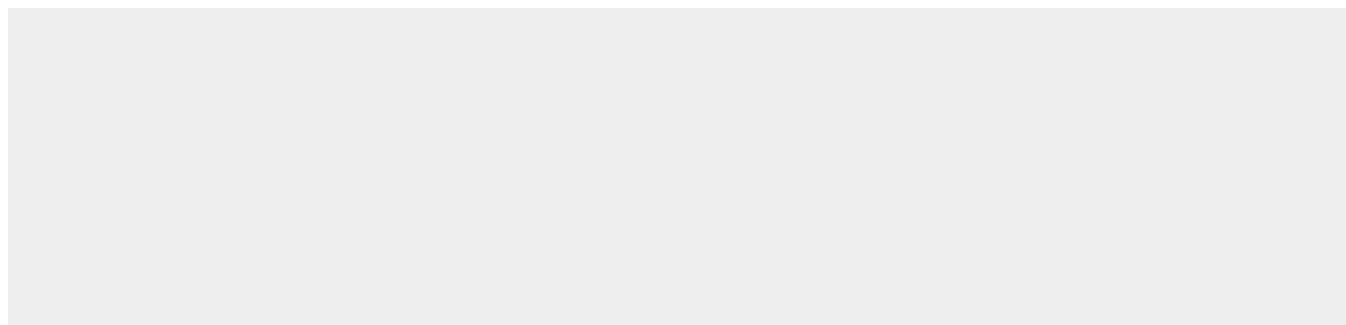
Cytoplasm. Nucleus Note=Present in the cytoplasm under non-stressed conditions and ER stress leads to its nuclear accumulation

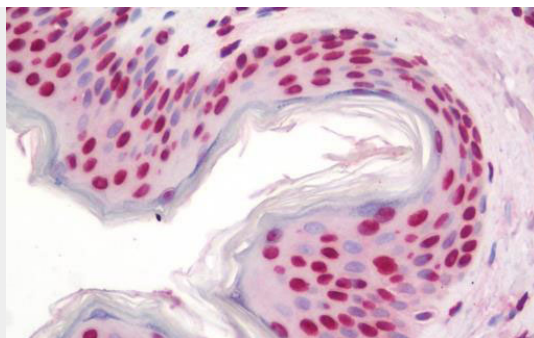
#### **DDIT3 / CHOP Antibody (clone 3H7) - Protocols**

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

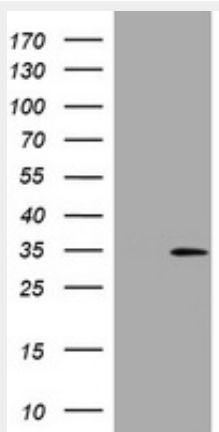
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **DDIT3 / CHOP Antibody (clone 3H7) - Images**





Anti-DDIT3 / CHOP antibody IHC staining of human skin.



HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY DDIT3...

### **DDIT3 / CHOP Antibody (clone 3H7) - Background**

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.

### **DDIT3 / CHOP Antibody (clone 3H7) - References**

Park J.S.,et al.Gene 116:259-267(1992).  
Croizat A.,et al.Nature 363:640-644(1993).  
Rabbitts T.H.,et al.Nat. Genet. 4:175-180(1993).  
Li X.,et al.Submitted (OCT-2003) to the EMBL/GenBank/DDBJ databases.  
Scherer S.E.,et al.Nature 440:346-351(2006).