10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

DDIT3 Antibody (C-term A135)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11955B

Specification

DDIT3 Antibody (C-term A135) - Product Information

Application	**WB, FC,E**
Primary Accession	P35638
Other Accession	P35639, P14607, Q0IIB6, NP_004074
Reactivity	**Human, Mouse**
Predicted	**Bovine, Hamster**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**120-149**

DDIT3 Antibody (C-term A135) - 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

Target/Specificity
This DDIT3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 120-149 amino acids from the C-terminal region of human DDIT3.

Dilution
WB~~1:2000
FC~~1:25
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
DDIT3 Antibody (C-term A135) is for research use only and not for use in diagnostic or therapeutic procedures.

DDIT3 Antibody (C-term A135) - 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

DDIT3 Antibody (C-term A135) - 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

DDIT3 Antibody (C-term A135) - Images

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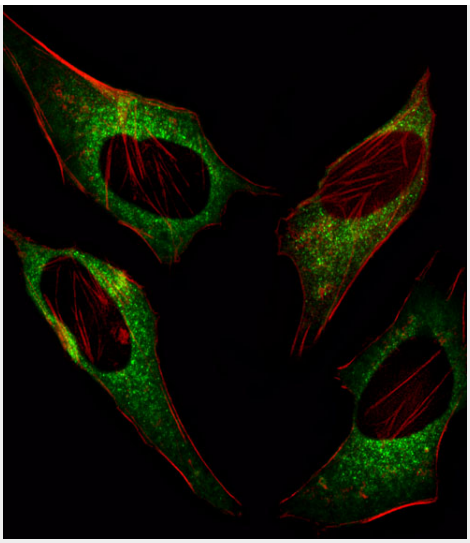
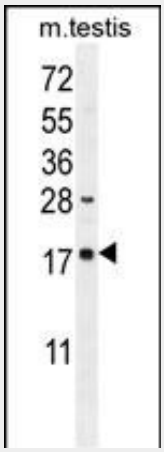


Fluorescent image of Hela cell stained with DDIT3 Antibody (C-term A135)(Cat#AP11955b/SA101207AA).Hela cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with DDIT3 primary antibody (1:25, 1 h at 37℃). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37℃).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37℃). DDIT3 immunoreactivity is localized to Cytoplasm significantly.



DDIT3 Antibody (C-term A135) (Cat. #AP11955b) western blot analysis in mouse testis tissue lysates (35ug/lane).This demonstrates the DDIT3 antibody detected the DDIT3 protein (arrow).

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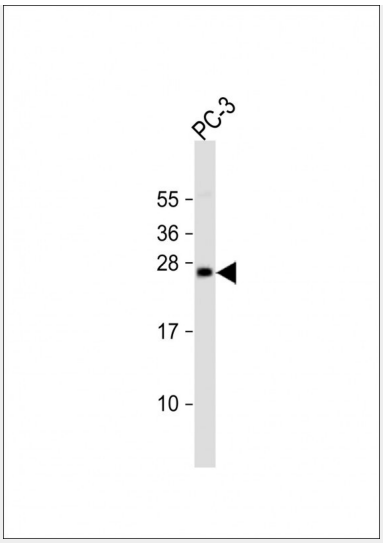
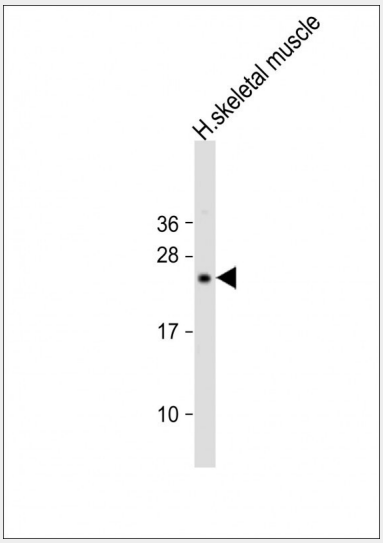
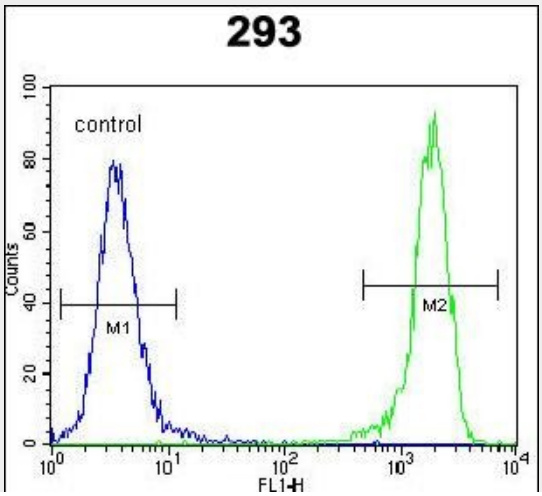


Anti-DDIT3 Antibody (C-term A135) at 1:2000 dilution + PC-3 whole cell lyslate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 19 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Anti-DDIT3 Antibody (C-term A135) at 1:2000 dilution + human skeletal muscle lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 19 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



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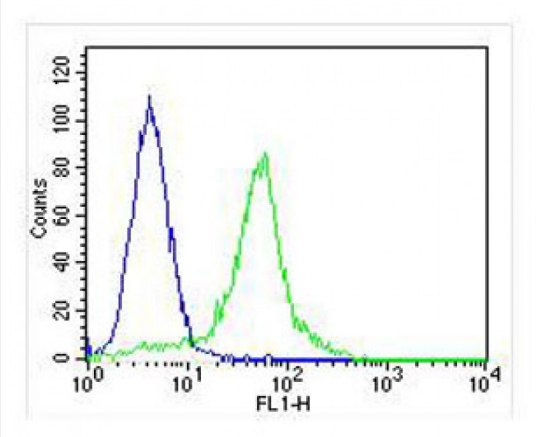
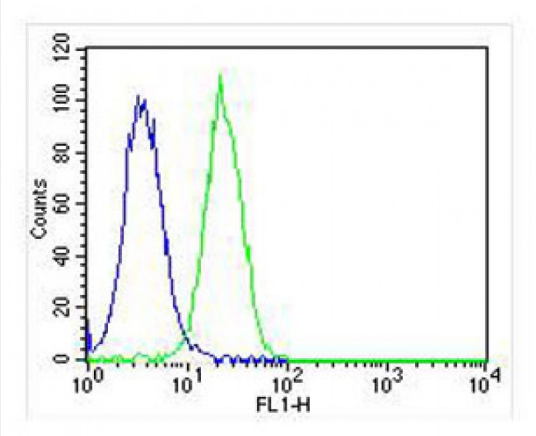
DDIT3 Antibody (C-term A135) (Cat. #AP11955b) flow cytometric analysis of 293 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



Overlay histogram showing Hela cells stained with AP11955b (green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP11955b, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(OH191631) at 1/400 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



Overlay histogram showing Hela cells stained with AP11955b (green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP11955b, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(OH191631) at 1/400 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.

DDIT3 Antibody (C-term A135) - Background

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.

DDIT3 Antibody (C-term A135) - References

Park, S.H., et al. J. Immunol. 185(9):5522-5530(2010)
Goodall, J.C., et al. Proc. Natl. Acad. Sci. U.S.A. 107(41):17698-17703(2010)
Zhang, H.M., et al. J. Virol. 84(17):8446-8459(2010)
Cazanave, S.C., et al. Am. J. Physiol. Gastrointest. Liver Physiol. 299 (1), G236-G243 (2010) :
Wang, Y.L., et al. J. Exp. Clin. Cancer Res. 29, 54 (2010) :

DDIT3 Antibody (C-term A135) - Citations

- Endoplasmic Reticulum Stress Affects Cholesterol Homeostasis by Inhibiting LXRα Expression in Hepatocytes and Macrophages