

Anti-DDIT3/Chop Rabbit Monoclonal Antibody
Catalog # ABO13752

Specification

Anti-DDIT3/Chop Rabbit Monoclonal Antibody - Product Information

| | |
|-------------------|------------------------|
| Application | WB, IHC, FC |
| Primary Accession | P35638 |
| Host | Rabbit |
| Isotype | Rabbit IgG |
| Reactivity | Rat, Human, Mouse |
| Clonality | Monoclonal |
| Format | Liquid |

Description

Anti-DDIT3/Chop Rabbit Monoclonal Antibody . Tested in WB, IHC, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

Anti-DDIT3/Chop Rabbit Monoclonal Antibody - 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

Calculated MW

19175 MW KDa

Application Details

WB 1:500-1:2000
IHC 1:50-1:200
FC 1:50

Subcellular Localization

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

Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen

A synthesized peptide derived from human DDIT3

Purification

Affinity-chromatography

Storage

Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Anti-DDIT3/Chop Rabbit Monoclonal Antibody - 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

Anti-DDIT3/Chop Rabbit Monoclonal Antibody - 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](#)

Anti-DDIT3/Chop Rabbit Monoclonal Antibody - Images

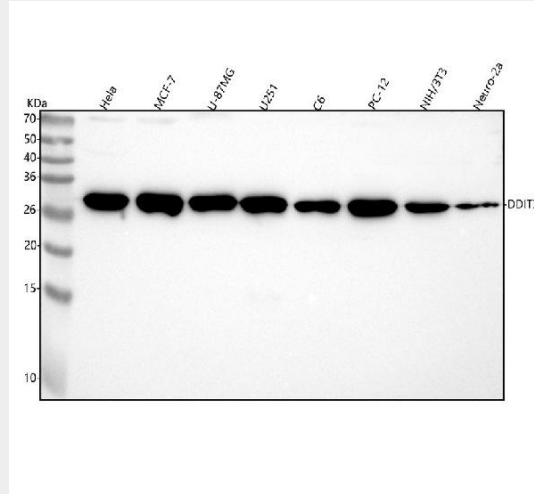


Figure 1. Western blot analysis of DDIT3 using anti-DDIT3 antibody (M00311).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

- Lane 1: human HeLa whole cell lysates,
- Lane 2: human MCF-7 whole cell lysates,
- Lane 3: human U-87MG whole cell lysates,
- Lane 4: human U251 whole cell lysates,
- Lane 5: rat C6 whole cell lysates,
- Lane 6: rat PC-12 whole cell lysates,
- Lane 7: mouse NIH/3T3 whole cell lysates,
- Lane 8: mouse Neuro-2a whole cell lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-DDIT3 antigen affinity purified monoclonal antibody (Catalog # M00311) at 1:500 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:500 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for DDIT3 at approximately 29 kDa. The expected band size for DDIT3 is at 20 kDa.