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# DDIT4 Antibody (C-term)

**Purified Rabbit Polyclonal Antibody (Pab)**
**Catalog # AP6268b**

## Specification

### DDIT4 Antibody (C-term) - Product Information

| | |
|---|---|
| Application | **WB, IHC-P, FC,E** |
| Primary Accession | Q9NX09 |
| Other Accession | Q8VHZ9, Q9D3F7, Q08E62 |
| Reactivity | **Human** |
| Predicted | **Bovine, Mouse, Rat** |
| Host | **Rabbit** |
| Clonality | **Polyclonal** |
| Isotype | **Rabbit IgG** |
| Calculated MW | **25371** |
| Antigen Region | **198-227** |

### DDIT4 Antibody (C-term) - Additional Information

**Gene ID** 54541

**Other Names**
DNA damage-inducible transcript 4 protein, HIF-1 responsive protein RTP801, Protein regulated in development and DNA damage response 1, REDD-1, DDIT4, REDD1, RTP801

**Target/Specificity**
This DDIT4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 198-227 amino acids from the C-terminal region of human DDIT4.

**Dilution**
WB~~1:1000
IHC-P~~1:10~50
FC~~1:10~50

**Format**
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

**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**
DDIT4 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

### DDIT4 Antibody (C-term) - Protein Information

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**Name** DDIT4

**Synonyms** REDD1, RTP801

**Function** Regulates cell growth, proliferation and survival via inhibition of the activity of the mammalian target of rapamycin complex 1 (mTORC1). Inhibition of mTORC1 is mediated by a pathway that involves DDIT4/REDD1, AKT1, the TSC1-TSC2 complex and the GTPase RHEB. Plays an important role in responses to cellular energy levels and cellular stress, including responses to hypoxia and DNA damage. Regulates p53/TP53-mediated apoptosis in response to DNA damage via its effect on mTORC1 activity. Its role in the response to hypoxia depends on the cell type; it mediates mTORC1 inhibition in fibroblasts and thymocytes, but not in hepatocytes (By similarity). Required for mTORC1-mediated defense against viral protein synthesis and virus replication (By similarity). Inhibits neuronal differentiation and neurite outgrowth mediated by NGF via its effect on mTORC1 activity. Required for normal neuron migration during embryonic brain development. Plays a role in neuronal cell death.

**Cellular Location**
Mitochondrion. Cytoplasm, cytosol

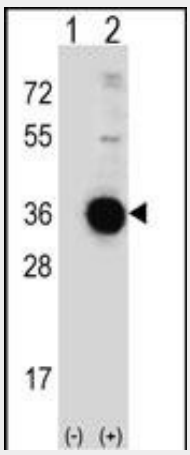
**Tissue Location**
Broadly expressed, with lowest levels in brain, skeletal muscle and intestine. Up-regulated in substantia nigra neurons from Parkinson disease patients (at protein level)

## DDIT4 Antibody (C-term) - Protocols

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

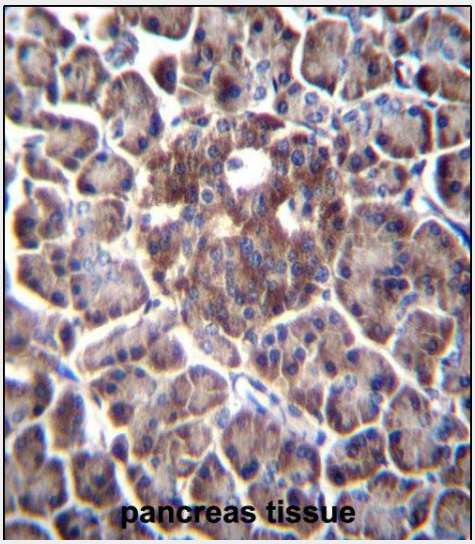
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## DDIT4 Antibody (C-term) - Images

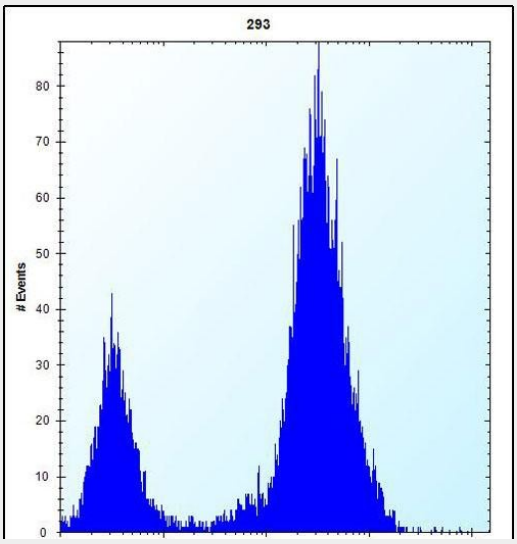



Western blot analysis of DDIT4 (arrow) using rabbit polyclonal DDIT4 Antibody (C-term) (Cat.#AP6268b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently

transfected (Lane 2) with the DDIT4 gene.




DDIT4 Antibody (C-term) (Cat. #AP6268b)immunohistochemistry analysis in formalin fixed and paraffin embedded human pancreas tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of DDIT4 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.




DDIT4 Antibody (C-term) (Cat. #AP6268b) 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.

**DDIT4 Antibody (C-term) - Background**

REDD1 is a novel transcriptional target of p53 induced following DNA damage. During embryogenesis, REDD1 expression mirrors the tissue-specific pattern of the p53 family member p63, and TP63 null embryos show virtually no expression of REDD1, which is restored in mouse embryo fibroblasts following p63 expression. In differentiating primary keratinocytes, TP63 and REDD1 expression are coordinately downregulated, and ectopic expression of either gene inhibits in vitro differentiation. REDD1 appears to function in the regulation of reactive oxygen species (ROS); TP63 null fibroblasts have decreased ROS levels and reduced sensitivity to oxidative stress, which are both increased following ectopic expression of either TP63 or REDD1. Thus, REDD1 encodes a shared transcriptional target that implicates ROS in the p53-dependent DNA damage response and in p63-mediated regulation of epithelial differentiation.

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## DDIT4 Antibody (C-term) - References

Ellisen L.W., Mol. Cell 10:995-1005(2002).
Shoshani T.,Mol. Cell. Biol. 22:2283-2293(2002).