

# REDD-1 (H-110): sc-67051

## BACKGROUND

REDD-1, also designated DNA damage-inducible transcript 4 (dig2) or RTP801, is thought to function in the regulation of reactive oxygen species (ROS). REDD-1 expression has also been linked to apoptosis, A $\beta$  toxicity and the pathogenesis of ischemic diseases. As an HIF-1-responsive gene, REDD-1 exhibits strong hypoxia-dependent upregulation in ischemic cells of neuronal origin. In response to stress due to DNA damage and glucocorticoid treatment, REDD-1 is upregulated at the transcriptional level. REDD-1 negatively regulates the mammalian target of Rapamycin, a serine/threonine kinase often referred to as mTOR. It is crucial in the coupling of extra- and intracellular cues to mTOR regulation. The absence of REDD-1 is associated with the development of retinopathy, a major cause of blindness.

## REFERENCES

1. Shoshani, T., et al. 2002. Identification of a novel hypoxia-inducible factor 1-responsive gene, RTP801, involved in apoptosis. *Mol. Cell. Biol.* 22: 2283-2293.
2. Kim, J.R., et al. 2003. Identification of amyloid  $\beta$ -peptide responsive genes by cDNA microarray technology: involvement of RTP801 in A $\beta$ -peptide toxicity. *Exp. Mol. Med.* 35: 403-411.

## CHROMOSOMAL LOCATION

Genetic locus: DDIT4 (human) mapping to 10q22.1; Ddit4 (mouse) mapping to 10 B4.

## SOURCE

REDD-1 (H-110) is a rabbit polyclonal antibody raised against amino acids 28-137 mapping within an internal region of REDD-1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

REDD-1 (H-110) is recommended for detection of REDD-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

REDD-1 (H-110) is also recommended for detection of REDD-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for REDD-1 siRNA (h): sc-45806, REDD-1 siRNA (m): sc-45807, REDD-1 shRNA Plasmid (h): sc-45806-SH, REDD-1 shRNA Plasmid (m): sc-45807-SH, REDD-1 shRNA (h) Lentiviral Particles: sc-45806-V and REDD-1 shRNA (m) Lentiviral Particles: sc-45807-V.

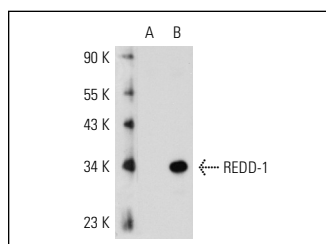
Molecular Weight of REDD-1: 34 kDa.

Positive Controls: REDD-1 (h): 293 Lysate: sc-111360.

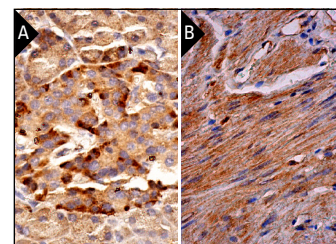
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz<sup>™</sup>: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



REDD-1 (H-110): sc-67051. Western blot analysis of REDD-1 expression in non-transfected: sc-110760 (A) and human REDD-1 transfected: sc-111360 (B) 293 whole cell lysates.



REDD-1 (H-110): sc-67051. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans and glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human smooth muscle tissue showing cytoplasmic staining of smooth muscle cells (B).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

**MONOS**  
Satisfaction  
Guaranteed

Try **REDD-1 (A-4): sc-271158** or **REDD-1 (B-3): sc-376671**, our highly recommended monoclonal alternatives to REDD-1 (H-110).