10320 Camino Santa Fe, Suite G
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Phospho-Thr23/25 REDD1 Antibody

Affinity purified rabbit polyclonal antibody

Catalog # AN1256

Specification

Phospho-Thr23/25 REDD1 Antibody - Product Information

Application	**WB**
Primary Accession	Q9NX09
Reactivity	**Human**
Host	**Rabbit**
Clonality	**polyclonal**
Calculated MW	**34 KDa**

Phospho-Thr23/25 REDD1 Antibody - Additional Information

Gene ID	**54541**
Gene Name	**DDIT4**

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

Synthetic phospho-peptide corresponding to amino acid residues surrounding Thr23/25 conjugated to KLH.

Dilution

WB~~ 1:500

Format

Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephospho-peptide affinity columns.

Antibody Specificity

Specific for the ~34k REDD1 phosphorylated at Thr23/25. Immunolabelingis blocked by the phosphopeptide used as antigen but not by the correspondingdephosphopeptide.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Phospho-Thr23/25 REDD1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping

Blue Ice

Phospho-Thr23/25 REDD1 Antibody - Protocols

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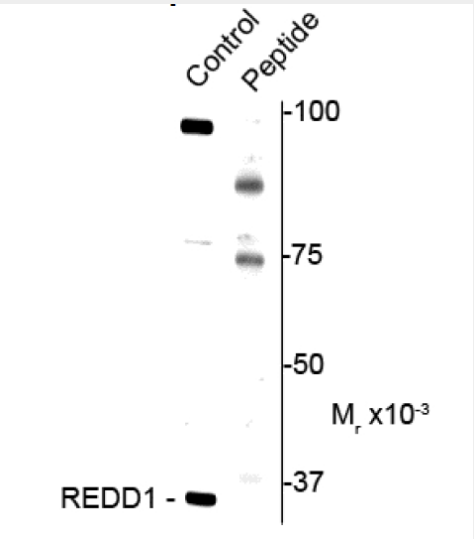
Provided below are standard protocols that you may find useful for product applications.

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

Phospho-Thr23/25 REDD1 Antibody - Images



Western blot of human jurkat lysate showing specific immunolabeling of the ~34k REDD1 protein phosphorylated at Thr23/25 (control). Immunolabeling is blocked by the phospho-peptide used as antigen (peptide) but not by the corresponding dephospho-peptide (not shown).

Phospho-Thr23/25 REDD1 Antibody - Background

REDD1, Regulated in Development and DNA damage responses 1, is induced by hypoxia, cell stress, and apoptosis. Reduced REDD 1 levels can sensitize cells towards apoptosis, where elevated levels of REDD1 induced by hypoxia c an desensitize cells to apoptotic stimuli (Schwarzer et al, 2005). REDD1 has a crucial role in inhibiting mammalian rapamycin complex 1 (mTORC1) signaling during hypoxic stress (Katiyar et al, 2009). It has been shown that the rapid degradation of REDD1 is mediated by the CUL4A–DDB1–ROC1–b-TRCP E3 ligase complex and is regulated by REDD1 phosphorylation at Thr 25, Thr 23 and Ser 19 throu gh the activity of GSK3b (Katiyar et al, 2009).

Phospho-Thr23/25 REDD1 Antibody - References

Schwarzer r, Tondera D, Arnold W, Giese K, Klippel A, Kaufmann J (2005) REDD1 integrates hypoxia-mediated survival signaling downstream of phosphatidylinositol 3-kinase. Oncogene

24(7): 1138-49.
Katiyar S, Liu E, Knutzen CA, Lang ES, Lombardo CR, Sankar S, Toth JI, Petroski MD, Ronai Z, Chiang GC (2009) REDD1, an inhibitor of mTOR signaling, is regulated by the CUL4A-DDB1 ubiquitin ligase. EMBO Rep 10(8):866-72.