

RIF1 Antibody (C-Term)
Peptide-affinity purified goat antibody
Catalog # AF3774a

Specification

RIF1 Antibody (C-Term) - Product Information

Application	WB
Primary Accession	Q5UIPO
Other Accession	NP_060621.3 , NP_001171134.1 , 55183 , 51869 (mouse)
Reactivity	Human, Mouse
Predicted	Pig, Dog, Cow
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	274466

RIF1 Antibody (C-Term) - Additional Information

Gene ID 55183

Other Names

Telomere-associated protein RIF1, Rap1-interacting factor 1 homolog, RIF1

Format

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

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

RIF1 Antibody (C-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

RIF1 Antibody (C-Term) - Protein Information

Name RIF1 {ECO:0000303|PubMed:15342490, ECO:0000312|HGNC:HGNC:23207}

Function

Key regulator of TP53BP1 that plays a key role in the repair of double-strand DNA breaks (DSBs) in response to DNA damage: acts by promoting non-homologous end joining (NHEJ)-mediated repair of DSBs (PubMed: [15342490](http://www.uniprot.org/citations/15342490), PubMed: [28241136](http://www.uniprot.org/citations/28241136)). In response to DNA damage, interacts with ATM-phosphorylated TP53BP1 (PubMed: [23333306](http://www.uniprot.org/citations/23333306))

target="_blank">23333306, PubMed:28241136). Interaction with TP53BP1 leads to dissociate the interaction between NUDT16L1/TIRR and TP53BP1, thereby unmasking the tandem Tudor-like domain of TP53BP1 and allowing recruitment to DNA DSBs (PubMed:28241136). Once recruited to DSBs, RIF1 and TP53BP1 act by promoting NHEJ-mediated repair of DSBs (PubMed:23333306). In the same time, RIF1 and TP53BP1 specifically counteract the function of BRCA1 by blocking DSBs resection via homologous recombination (HR) during G1 phase (PubMed:23333306). Also required for immunoglobulin class-switch recombination (CSR) during antibody genesis, a process that involves the generation of DNA DSBs (By similarity). Promotes NHEJ of dysfunctional telomeres (By similarity).

Cellular Location

Nucleus. Chromosome {ECO:0000250|UniProtKB:Q6PR54}. Chromosome, telomere. Cytoplasm, cytoskeleton, spindle. Note=Following interaction with TP53BP1, recruited to sites of DNA damage, such as DSBs (By similarity). Exhibits ATM- and TP53BP1-dependent localization to uncapped or aberrant telomeres and to DNA double strand breaks (DSBs) (PubMed:15342490). Does not associate with normal telomere structures (PubMed:15342490, PubMed:15583028). Localizes to microtubules of the midzone of the mitotic spindle during anaphase, and to condensed chromosomes in telophase (PubMed:15583028) {ECO:0000250|UniProtKB:Q6PR54, ECO:0000269|PubMed:15342490, ECO:0000269|PubMed:15583028}

Tissue Location

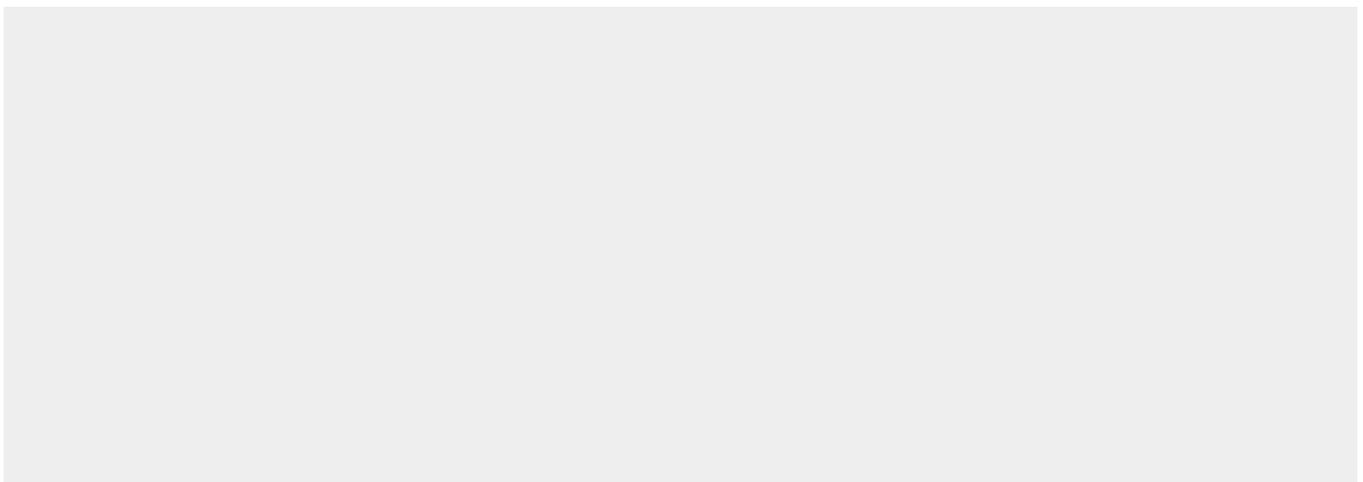
Highly expressed in testis.

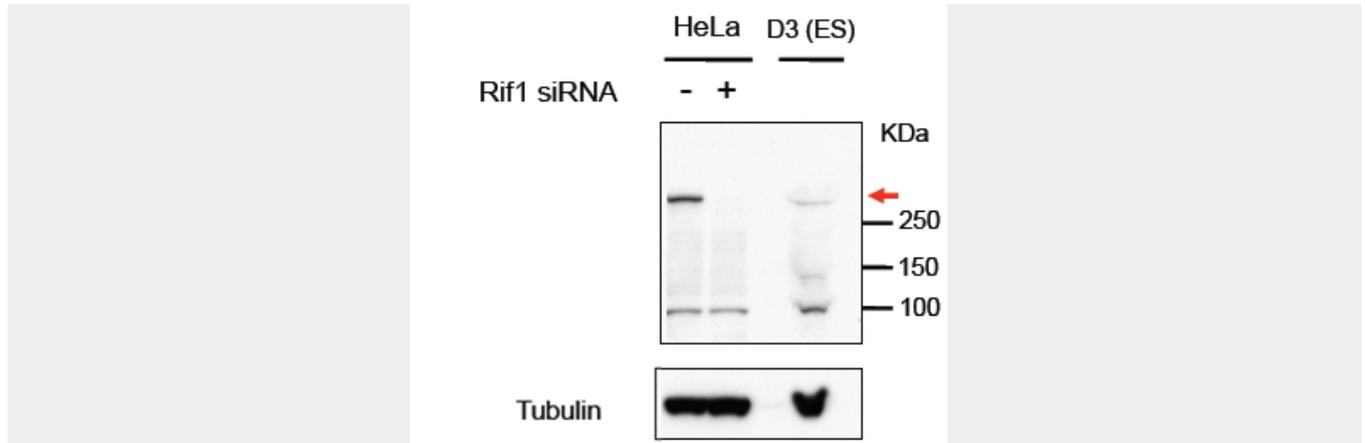
RIF1 Antibody (C-Term) - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

RIF1 Antibody (C-Term) - Images





AF3774a (1 μ g/ml) staining of HeLa and Mouse D3 (ES) lysates (35 μ g protein in RIPA buffer). Data obtained from Hisao Masai, Tokyo Metropolitan Institute of Medical Science, Japan. Primary incubation was 1 hour. Detected by chemiluminescence.

RIF1 Antibody (C-Term) - Background

This antibody is expected to recognize both reported isoforms (NP_060621.3; NP_001171134.1). The immunizing peptide sequence has been optimised for cross-reactivity in mouse. Reported variants represent identical protein: NP_001171135.1, NP_001171136.1, NP

RIF1 Antibody (C-Term) - References

Human RIF1 encodes an anti-apoptotic factor required for DNA repair. Wang H, Zhao A, Chen L, Zhong X, Liao J, Gao M, Cai M, Lee DH, Li J, Chowdhury D, Yang YG, Pfeifer GP, Yen Y, Xu X. *Carcinogenesis*. 2009 Aug;30(8):1314-9. PMID: 19483192