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RIF1 (aa 2076-2089) Antibody (internal region)

Peptide-affinity purified goat antibody
Catalog # AF2421a

Specification

RIF1 (aa 2076-2089) Antibody (internal region) - Product Information

Application	**E**
Primary Accession	Q5UIP0
Other Accession	NP_060621.3, 55183
Predicted	**Human**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**0.5 mg/ml**
Isotype	**IgG**
Calculated MW	**274466**

RIF1 (aa 2076-2089) Antibody (internal region) - 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 (aa 2076-2089) Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

RIF1 (aa 2076-2089) Antibody (internal region) - 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, PubMed:28241136). In response to DNA damage, interacts with ATM-phosphorylated TP53BP1 (PubMed: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 (aa 2076-2089) Antibody (internal region) - 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

RIF1 (aa 2076-2089) Antibody (internal region) - Images

RIF1 (aa 2076-2089) Antibody (internal region) - Background

This antibody is expected to recognise an epitope corresponding to aa 2076-2089 of human RIF1 protein.

RIF1 (aa 2076-2089) Antibody (internal region) - References

Human Rif1, ortholog of a yeast telomeric protein, is regulated by ATM and 53BP1 and functions in the S-phase checkpoint. Silverman J, Takai H, Buonomo SB, Eisenhaber F, de Lange T. Genes Dev. 2004 Sep 1;18(17):2108-19. PMID: 15342490