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# FHIT Antibody (N-Term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21842a

## Product Information

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| **Application** | WB, E |
| **Primary Accession** | P49789 |
| **Reactivity** | Human, Rat, Mouse |
| **Host** | Rabbit |
| **Clonality** | polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB53956 |
| **Calculated MW** | 16858 |

## Additional Information

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| **Gene ID** | 2272 |
| **Other Names** | Bis(5'-adenosyl)-triphosphatase, AP3A hydrolase, AP3Aase, Diadenosine 5', 5'''-P1, P3-triphosphate hydrolase, Dinucleosidetriphosphatase, Fragile histidine triad protein, FHIT |
| **Target/Specificity** | This FHIT antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between19-54 amino acids from human FHIT. |
| **Dilution** | WB~~1:2000 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification. |
| **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** | FHIT Antibody (N-Term) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | FHIT |
| **Function** | Possesses dinucleoside triphosphate hydrolase activity (PubMed: 12574506, PubMed:15182206, PubMed:8794732, PubMed:9323207, PubMed:9543008, PubMed:9576908). Cleaves P(1)-P(3)-bis(5'-adenosyl) triphosphate (Ap3A) to yield AMP and ADP (PubMed:12574506, PubMed:15182206, PubMed:8794732, PubMed:9323207, PubMed:9543008, PubMed:9576908). Can also hydrolyze |

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| | P(1)-P(4)-bis(5'-adenosyl) tetraphosphate (Ap4A), but has extremely low activity with ATP (PubMed:8794732). Exhibits adenylylsulfatase activity, hydrolyzing adenosine 5'-phosphosulfate to yield AMP and sulfate (PubMed:18694747). Exhibits adenosine 5'-monophosphoramidase activity, hydrolyzing purine nucleotide phosphoramidates with a single phosphate group such as adenosine 5'monophosphoramidate (AMP-NH2) to yield AMP and NH2 (PubMed:18694747). Exhibits adenylylsulfate-ammonia adenylyltransferase, catalyzing the ammonolysis of adenosine 5'-phosphosulfate resulting in the formation of adenosine 5'- phosphoramidate (PubMed:26181368). Also catalyzes the ammonolysis of adenosine 5-phosphorofluoridate and diadenosine triphosphate (PubMed:26181368). Modulates transcriptional activation by CTNNB1 and thereby contributes to regulate the expression of genes essential for cell proliferation and survival, such as CCND1 and BIRC5 (PubMed:18077326). Plays a role in the induction of apoptosis via SRC and AKT1 signaling pathways (PubMed:16407838). Inhibits MDM2-mediated proteasomal degradation of p53/TP53 and thereby plays a role in p53/TP53-mediated apoptosis (PubMed:15313915). Induction of apoptosis depends on the ability of FHIT to bind P(1)-P(3)-bis(5'-adenosyl) triphosphate or related compounds, but does not require its catalytic activity, it may in part come from the mitochondrial form, which sensitizes the low-affinity Ca(2+) transporters, enhancing mitochondrial calcium uptake (PubMed:12574506, PubMed:19622739). Functions as a tumor suppressor (By similarity). |
| **Cellular Location** | Cytoplasm. Mitochondrion. Nucleus |
| **Tissue Location** | Low levels expressed in all tissues tested. Phospho-FHIT observed in liver and kidney, but not in brain and lung Phospho-FHIT undetected in all tested human tumor cell lines |

## Background

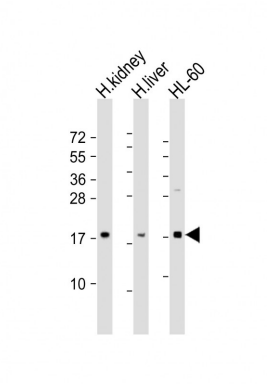
Cleaves P(1)-P(3)-bis(5'-adenosyl) triphosphate (Ap3A) to yield AMP and ADP. Can also hydrolyze P(1)-P(4)-bis(5'- adenosyl) tetraphosphate (Ap4A), but has extremely low activity with ATP. Modulates transcriptional activation by CTNNB1 and thereby contributes to regulate the expression of genes essential for cell proliferation and survival, such as CCND1 and BIRC5. Plays a role in the induction of apoptosis via SRC and AKT1 signaling pathways. Inhibits MDM2-mediated proteasomal degradation of p53/TP53 and thereby plays a role in p53/TP53-mediated apoptosis. Induction of apoptosis depends on the ability of FHIT to bind P(1)-P(3)-bis(5'-adenosyl) triphosphate or related compounds, but does not require its catalytic activity, it may in part come from the mitochondrial form, which sensitizes the low- affinity Ca(2+) transporters, enhancing mitochondrial calcium uptake. Functions as tumor suppressor.

## References

Ohta M.,et al.Cell 84:587-597(1996).
Druck T.,et al.Cancer Res. 57:504-512(1997).
Corominas R.,et al.Nat. Commun. 5:3650-3650(2014).
Naqvi S.R.A.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).

## Images

All lanes : Anti-FHIT Antibody (N-Term) at 1:2000 dilution
Lane 1: human kidney lysate Lane 2: human liver lysate
Lane 3: HL-60 whole cell lysate Lysates/proteins at 20 µg




per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 17 kDa Blocking/Dilution buffer: 5% NFDM/TBST.