

**FHIT Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP51208****Specification**

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**FHIT Antibody - Product Information**

Application	<b>WB, ICC, IHC-P, E</b>
Primary Accession	<a href="#">P49789</a>
Reactivity	<b>Human</b>
Host	<b>Rabbit</b>
Clonality	<b>Polyclonal</b>
Calculated MW	<b>17 KDa</b>

**FHIT Antibody - Additional Information****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

**Format**

0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%

**Storage**

Store at -20 °C. Stable for 12 months from date of receipt

**FHIT Antibody - Protein Information****Name** FHIT**Function**

Possesses dinucleoside triphosphate hydrolase activity (PubMed: [12574506](http://www.uniprot.org/citations/12574506), PubMed: [15182206](http://www.uniprot.org/citations/15182206), PubMed: [8794732](http://www.uniprot.org/citations/8794732), PubMed: [9323207](http://www.uniprot.org/citations/9323207), PubMed: [9543008](http://www.uniprot.org/citations/9543008), PubMed: [9576908](http://www.uniprot.org/citations/9576908)). Cleaves P(1)-P(3)-bis(5'-adenosyl) triphosphate (Ap3A) to yield AMP and ADP (PubMed: [12574506](http://www.uniprot.org/citations/12574506), PubMed: [15182206](http://www.uniprot.org/citations/15182206), PubMed: [8794732](http://www.uniprot.org/citations/8794732), PubMed: [9323207](http://www.uniprot.org/citations/9323207), PubMed: [9543008](http://www.uniprot.org/citations/9543008), PubMed: [9576908](http://www.uniprot.org/citations/9576908)). Can also hydrolyze P(1)-P(4)-bis(5'-adenosyl) tetraphosphate (Ap4A), but has extremely low activity with ATP (PubMed: [8794732](http://www.uniprot.org/citations/8794732))

target="\_blank">8794732</a>). Exhibits adenylylsulfatase activity, hydrolyzing adenosine 5'-phosphosulfate to yield AMP and sulfate (PubMed:<a href="http://www.uniprot.org/citations/18694747" target="\_blank">18694747</a>). Exhibits adenosine 5'-monophosphoramidase activity, hydrolyzing purine nucleotide phosphoramidates with a single phosphate group such as adenosine 5'monophosphoramidate (AMP-NH<sub>2</sub>) to yield AMP and NH<sub>2</sub> (PubMed:<a href="http://www.uniprot.org/citations/18694747" target="\_blank">18694747</a>). Exhibits adenylylsulfate-ammonia adenylyltransferase, catalyzing the ammonolysis of adenosine 5'- phosphosulfate resulting in the formation of adenosine 5'- phosphoramidate (PubMed:<a href="http://www.uniprot.org/citations/26181368" target="\_blank">26181368</a>). Also catalyzes the ammonolysis of adenosine 5-phosphorofluoridate and diadenosine triphosphate (PubMed:<a href="http://www.uniprot.org/citations/26181368" target="\_blank">26181368</a>). 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:<a href="http://www.uniprot.org/citations/18077326" target="\_blank">18077326</a>). Plays a role in the induction of apoptosis via SRC and AKT1 signaling pathways (PubMed:<a href="http://www.uniprot.org/citations/16407838" target="\_blank">16407838</a>). Inhibits MDM2-mediated proteasomal degradation of p53/TP53 and thereby plays a role in p53/TP53-mediated apoptosis (PubMed:<a href="http://www.uniprot.org/citations/15313915" target="\_blank">15313915</a>). 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:<a href="http://www.uniprot.org/citations/12574506" target="\_blank">12574506</a>, PubMed:<a href="http://www.uniprot.org/citations/19622739" target="\_blank">19622739</a>). 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

#### FHIT Antibody - 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](#)

#### FHIT Antibody - Images

#### FHIT Antibody - 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. Functions as tumor suppressor.

#### **FHIT Antibody - References**

- Ohta M., et al. Cell 84:587-597(1996).  
Druck T., et al. Cancer Res. 57:504-512(1997).  
Naqvi R.A., et al. Submitted (MAY-2004) to the EMBL/GenBank/DDBJ databases.  
Barnes L.D., et al. Biochemistry 35:11529-11535(1996).  
Gemmill R.M., et al. Proc. Natl. Acad. Sci. U.S.A. 95:9572-9577(1998).