10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-FHIT Picoband Antibody

Catalog # ABO11873

Specification

Anti-FHIT Picoband Antibody - Product Information

Application	**WB, IHC**
Primary Accession	P49789
Host	**Rabbit**
Reactivity	**Human**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Bis(5'-adenosyl)-triphosphatase(FHIT) detection. Tested with WB, IHC-P in Human.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-FHIT Picoband Antibody - Additional Information

Gene ID 2272

Other Names
Bis(5'-adenosyl)-triphosphatase, 3.6.1.29, AP3A hydrolase, AP3Aase, Diadenosine 5', 5'''-P1, P3-triphosphate hydrolase, Dinucleosidetriphosphatase, Fragile histidine triad protein, FHIT

Calculated MW
16858 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat
Western blot, 0.1-0.5 µg/ml, Human

Subcellular Localization
Cytoplasm. Mitochondrion. Nucleus.

Tissue Specificity
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.

Protein Name
Bis(5'-adenosyl)-triphosphatase

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
E.coli-derived human FHIT recombinant protein (Position: M1-Q147). Human FHIT shares 90% and 87% amino acid (aa) sequences identity with mouse and rat FHIT, respectively.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage

At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities
Contains 1 HIT domain.

Anti-FHIT Picoband Antibody - Protein Information

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 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

Anti-FHIT Picoband 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 Cytomety
- Cell Culture

Anti-FHIT Picoband Antibody - Images

Anti- FHIT Picoband antibody, ABO11873, Western blottingAll lanes: Anti FHIT (ABO11873) at 0.5ug/mlWB: Recombinant Human FHIT Protein 0.5ngPredicted bind size: 39KDObserved bind size: 39KD

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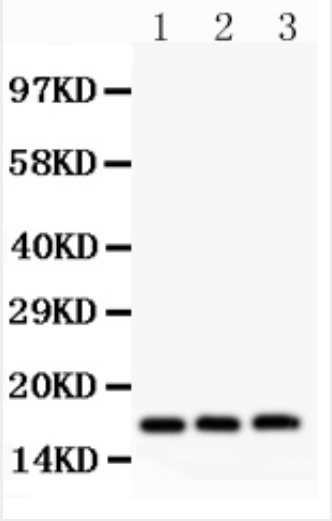
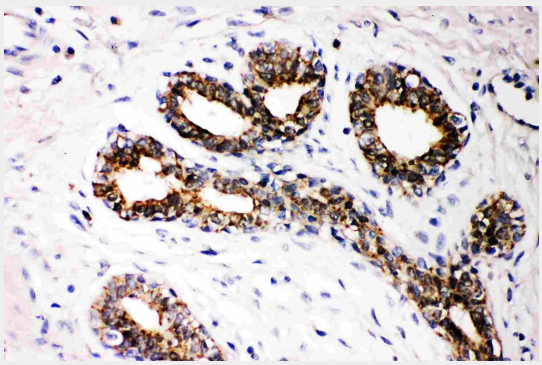


Anti- FHIT Picoband antibody, ABO11873, Western blottingAll lanes: Anti FHIT (ABO11873) at 0.5ug/mlLane 1: HT1080 Whole Cell Lysate at 40ugLane 2: SW620 Whole Cell Lysate at 40ugLane 3: Jurkat Whole Cell Lysate at 40ugPredicted bind size: 17KD Observed bind size: 17KD



Anti- FHIT Picoband antibody, ABO11873, IHC(P)IHC(P): Human Mammary Cancer Tissue

Anti-FHIT Picoband Antibody - Background

Bis(5'-adenosyl)-triphosphatase, also known as fragile histidine triad protein (FHIT) is an enzyme that in humans is encoded by the FHIT gene. This gene, a member of the histidine triad gene family, encodes a diadenosine P1,P3-bis(5'-adenosyl)-triphosphate adenylohydrolase involved in purine metabolism. The gene encompasses the common fragile site FRA3B on chromosome 3p14.2, where carcinogen-induced damage can lead to translocations and aberrant transcripts of this gene. In fact, aberrant transcripts from this gene have been found in about half of all esophageal, stomach, and colon carcinomas. Furthermore, FHIT has been shown to synergize with VHL, another tumor suppressor, in protecting against chemically - induced lung cancer. It also acts as a tumor suppressor of HER2/neu driven breast cancer.