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Anti-FHIT Picoband Antibody

Catalog # ABO11873

Product Information

Application	WB, IHC-P
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.

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
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, By Heat Western blot, 0.1-0.5 □g/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.
Source	Eukaryota
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.

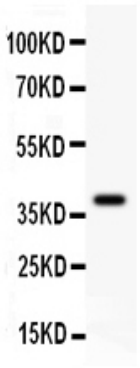
Protein Information

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

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.

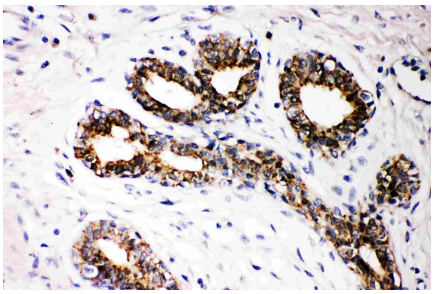
Images



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



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

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.