

## Recombinant Human Fragile Histidine Triad, GST-Tagged

Cat. No. FHIT-4358H Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	FHIT Human Recombinant full length protein expressed in E.coli, shows a 43 kDa band on SDS-PAGE. The FHIT is fused to GST-Tag and purified by proprietary chromatographic techniques.
<b>Species</b>	Human
<b>Source</b>	Human
<b>Description</b>	<p>FHIT is a member of the histidine triad gene family. FHIT gene encodes a diadenosine 5',5'''-P1,P3-triphosphate hydrolase involved in purine metabolism. FHIT gene includes the common fragile site FRA3B on chromosome 3, where carcinogen-induced damage can lead to translocations and abnormal transcripts of this gene. The FHIT protein is a tumor suppressor with reduced or no expression in numerous types of cancer. FHIT may also act as a tumor suppressor in normal cells. Alterations and deletions of the FHIT (Fragile Histidine Triad) gene are strongly linked to the genesis and establishment of human tumors of the lung, cervix, breast, colon, stomach, and pancreas. The expression of FHIT is more often lost in cancers of individuals with familial mutations causing deficiency in DNA repair genes such as BRCA1, BRCA2 and MSH2. In vitro FHIT functions as a hydrolase that cleaves diadenosine triphosphate (Ap3A) to ADP and AMP. The FHIT -Ap3A enzyme-substrate complex seems to be the tumor suppressor signal. The restoration of FHIT expression in FHIT -deficient cancer cells leads to apoptosis, involving the intrinsic caspase pathway, in cancer-derived cells and in tumor xenografts</p>

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<b>Form</b>	FHIT in 50mM Tris-Acetate, pH7.5, 1mM EDTA and 20% Glycerol.
<b>Physical Appearance</b>	Sterile Filtered clear solution.
<b>Storage</b>	Store vial at -20°C to -80°C. When stored at the recommended temperature, this protein is stable for 12 months. Please prevent freeze-thaw cycles.
<b>Pathways</b>	Non-small cell lung cancer; Purine metabolism; Small cell lung cancer
<b>Functions</b>	s(5"-adenosyl)-triphosphatase activity; hydrolase activity; magnesium ion binding; manganese ion binding; nickel ion binding; protein binding
<b>Full Length</b>	Full L.

## GENE INFORMATION

<b>Gene Name</b>	FHIT fragile histidine triad gene [ Homo sapiens ]
<b>Official Symbol</b>	FHIT
<b>Synonyms</b>	FHIT; fragile histidine triad gene; FRA3B; AP3Aase; bis(5"-adenosyl)-triphosphatase; AP3A hydrolase; tumor suppressor protein; dinucleosidetriphosphatase; diadenosine 5",5""-P1,P3-triphosphate hydrolase; EC 3.6.1.29
<b>Gene ID</b>	2272
<b>mRNA Refseq</b>	NM_001166243
<b>Protein Refseq</b>	NP_001159715
<b>MIM</b>	601153

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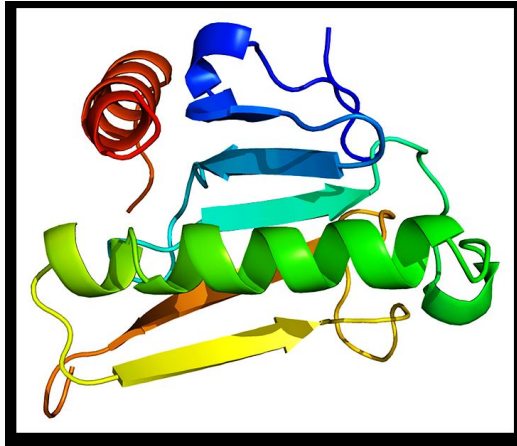
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UniProt ID	P49789
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Chromosome Location	3p14.2
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on 1fhi.



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