

Recombinant Human Fragile Histidine Triad, GST-Tagged

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

SPECIFICATION

Product Overview	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.
Species	Human
Source	Human
Description	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

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Form	FHIT in 50mM Tris-Acetate, pH7.5, 1mM EDTA and 20% Glycerol.
Physical Appearance	Sterile Filtered clear solution.
Storage	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.
Pathways	Non-small cell lung cancer; Purine metabolism; Small cell lung cancer
Functions	s(5"-adenosyl)-triphosphatase activity; hydrolase activity; magnesium ion binding; manganese ion binding; nickel ion binding; protein binding
Full Length	Full L.

GENE INFORMATION

Gene Name	FHIT fragile histidine triad gene [Homo sapiens]
Official Symbol	FHIT
Synonyms	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
Gene ID	2272
mRNA Refseq	NM_001166243
Protein Refseq	NP_001159715
MIM	601153

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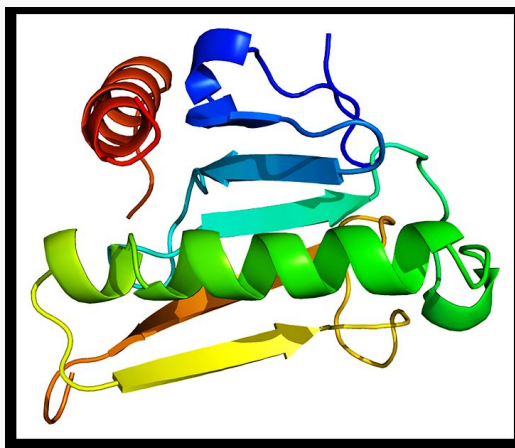
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UniProt ID [P49789](#)

Chromosome
Location 3p14.2

PDB rendering based
on 1fhi.



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