Data Sheet (Cat.No.TMPY-03398)

TargetMol

FHIT Protein, Human, Recombinant (His)

General Information

Synonyms:	FRA3B;AP3Aase;fragile histidine triad
Protein Construction:	A DNA sequence encoding the human FHIT (P49789) (Met1-Gln147) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	P49789
Molecular Weight:	17.7 kDa (predicted); 18 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 50 mM Tris, 10% glycerol, pH 8.0.Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Fragile histidine triad, also known as FHIT, may play a key role in differentiating humans from apes. Fragile histidine triad gene belongs to the histidine triad gene family. It has been shown that fragile histidine triad synergizes with VHL, another tumor suppressor, in protecting against chemically - induced lung cancer. Fragile histidine triad gene works as a tumor suppressor as it has been demonstrated in animal studies. The exact molecular function of FHIT is still partially unclear. It also acts as a tumor suppressor of HER2/neu driven breast

cancer.

Reference

Lambert N,et al.(2006) An RNA gene expressed during cortical development evolved rapidly in humans. Nature. 443(7108):167-72.
Pekarsky Y,et al.(1998) Nitrilase and Fhit homologs are encoded as fusion proteins in Drosophila melanogaster and Caenorhabditis elegans. Proc Natl Acad Sci. 95(15):8744-9.
Ohta M,et al.(1996) The FHIT gene, spanning the chromosome 3p14.2 fragile site and renal carcinoma-associated t (3;8) breakpoint, is abnormal in digestive tract cancers. Cell. 84(4): 587-97.