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Product datasheet for RC207120

FHIT (NM_002012) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	FHIT (NM_002012) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	FHIT
Synonyms:	AP3Aase; FRA3B
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC207120 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCGTTCAGATTTGGCCAACATCTCATCAAGCCCTCTGTAGTGTTTCTCAAAACAGAACTGTCCTTCG
CTCTTGTGAATAGGAAACCTGTGGTACCAGGACATGTCCTTGTGTGCCCGCTGCGGCCAGTGGAGCGCTT
CCATGACCTGCGTCCTGATGAAGTGGCCGATTTGTTTCAGACGACCCAGAGAGTCGGGACAGTGGTGGAA
AAACATTTCCATGGGACCTCTCTCACCTTTTCCATGCAGGATGGCCCCGAAGCCGGACAGACTGTGAAGC
ACGTTCACGTCCATGTTCTTCCCAGGAAGGCTGGAGACTTTCACAGGAATGACAGCATCTATGAGGAGCT
CCAGAAACATGACAAGGAGGACTTTCCTGCCTCTTGGAGATCAGAGGAGGAAATGGCAGCAGAAGCCGCA
GCTCTGCGGGTCTACTTTCAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC207120 protein sequence
Red=Cloning site Green=Tags(s)

MSFRFGQHLIKPSVVFLKTELSFALVNRKPVVPGHVLVCPLRPVERFHDLRPDEVADLFQTTQRVGTVVE
KHFHGTSLTFSMQDGPEAGQTVKHVHVHVLPRKAGDFHRNDSIYEELQKHDKEDFPASWRSEEEMAAEAA
ALRVYFQ

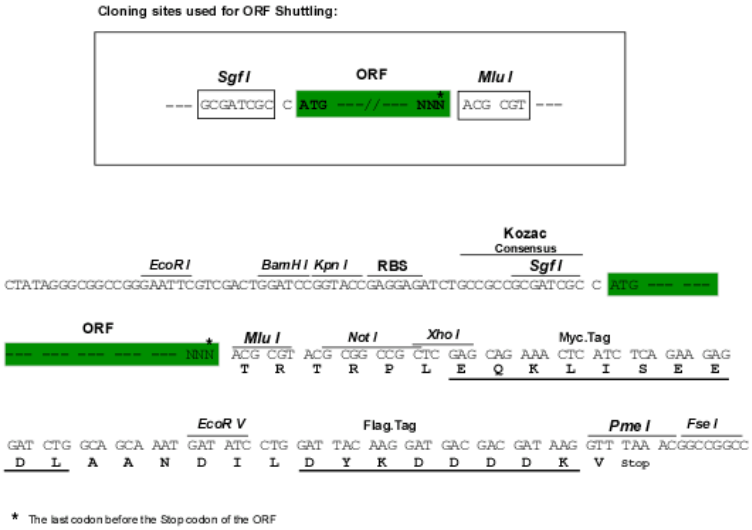
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6020_a03.zip

View online »

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002012

ORF Size: 441 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:
1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

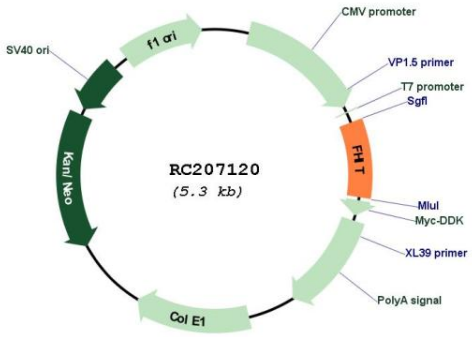
RefSeq: NM_002012.4

RefSeq Size: 1103 bp

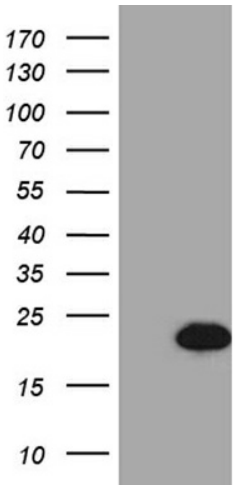
RefSeq ORF: 444 bp

Locus ID:	2272
UniProt ID:	P49789
Cytogenetics:	3p14.2
Domains:	HIT
Protein Pathways:	Non-small cell lung cancer, Purine metabolism, Small cell lung cancer
MW:	16.9 kDa
Gene Summary:	The protein encoded by this gene is a P1-P3-bis(5'-adenosyl) triphosphate hydrolase involved in purine metabolism. This gene encompasses the common fragile site FRA3B on chromosome 3, where carcinogen-induced damage can lead to translocations and aberrant transcripts. In fact, aberrant transcripts from this gene have been found in about half of all esophageal, stomach, and colon carcinomas. The encoded protein is also a tumor suppressor, as loss of its activity results in replication stress and DNA damage. [provided by RefSeq, Aug 2017]

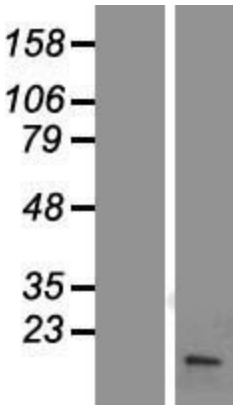
Product images:



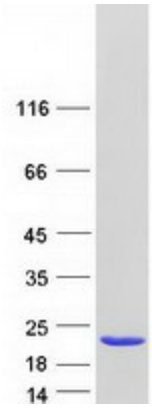
Circular map for RC207120



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY FHIT (Cat# RC207120, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-FHIT (Cat# [TA811440])(1:2000). Positive lysates [LY419588] (100ug) and [LC419588] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY431768]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC228740] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified FHIT protein (Cat# [TP307120]). The protein was produced from HEK293T cells transfected with FHIT cDNA clone (Cat# RC207120) using MegaTran 2.0 (Cat# [TT210002]).