For Research Use Only

MTIF3 Polyclonal antibody

Catalog Number:14219-1-AP Featured Product 8 Publications

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Basic Information

Catalog Number:
14219-1-AP

Size:
150ul , Concentration: 400 ug/ml by Nanodrop and 293 ug/ml by Bradford method using BSA as the standard;

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG5457

GenBank Accession Number:
BC046166

GeneID (NCBI):
219402

UNIPROT ID:
Q9H2K0

Full Name:
mitochondrial translational initiation factor 3

Calculated MW:
32 kDa

Observed MW:
29 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
WB 1:500-1:2000
IP 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate
IHC 1:50-1:500

Applications

Tested Applications:
WB, IP, IHC, ELISA

Cited Applications:
WB

Species Specificity:
human, mouse

Cited Species:
human, rat, mouse

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB : A431 cells, human preadipocyte cells, HT-29 cells, HeLa cells, HepG2 cells

IP : HeLa cells,

IHC : human liver tissue, mouse testis tissue, human testis tissue

Background Information

MTIF3, also named as DC38, belongs to the IF-3 family. MTIF3 encodes a 29 kDa protein that promotes formation of the initiation complex on the mitochondrial 55S ribosome, thereby playing an active role in initiation of translation. Like bacterial IF3, MTIF3 is believed to bind first to the small mitoribosomal subunit to keep it dissociated from the large subunit during initiation. After binding of MTIF3, mRNA and formylated initiator methionyl-tRNA (fMet-tRNAifMet) bind to the small mitoribosomal subunit. The large subunit then joins the small subunit to form an elongation-competent ribosome (PMID:20887776, 31350787).

Notable Publications

Author	Pubmed ID	Journal	Application
Nicola Ferreira	31721250	EMBO J	WB
Denise Müller	29990590	Clin Immunol	
Danielle L Rudler	31903419	Sci Adv	WB

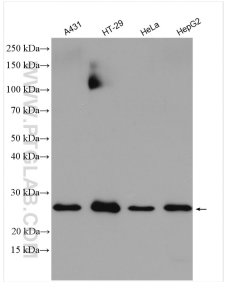
Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

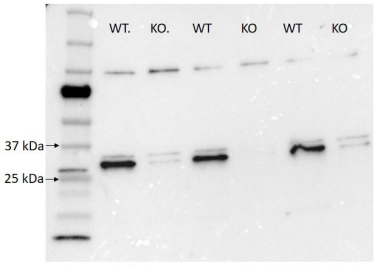
*** 20ul sizes contain 0.1% BSA

For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

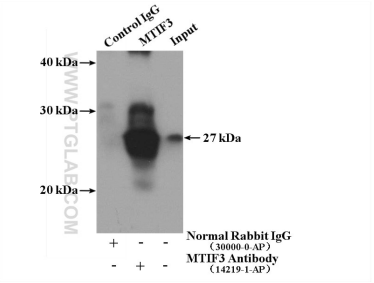
Selected Validation Data



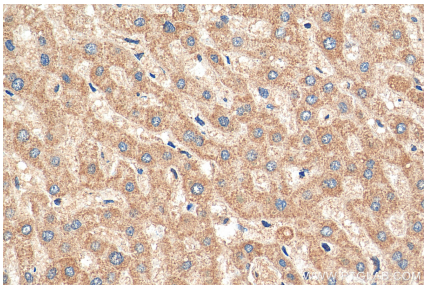
Various lysates were subjected to SDS PAGE followed by western blot with 14219-1-AP (MTIF3 antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.



The MTIF3 knockout (>80% KO efficiency as evaluated by Sanger sequencing) and wildtype (WT) human preadipocyte cells were lysed in 1% SDS. 10 µg total protein were subjected to SDS PAGE followed by western blot with 14219-1-AP (MTIF3 antibody) at dilution of 1:2000 incubated overnight at 4 oC. Date from Dr. Mi Huang.



IP result of anti-MTIF3 (IP:14219-1-AP, 4ug; Detection:14219-1-AP 1:500) with HeLa cells lysate 3200ug.



Immunohistochemical analysis of paraffin-embedded human liver tissue slide using 14219-1-AP (MTIF3 antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).