For Research Use Only

FUS/TLS Monoclonal antibody

Catalog Number:60160-1-Ig Featured Product 20 Publications

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Basic Information

Catalog Number:
60160-1-Ig

Size:
150ul , Concentration: 1000 μg/ml by Nanodrop;

Source:
Mouse

Isotype:
IgG1

Immunogen Catalog Number:
AG2150

GenBank Accession Number:
BC026062

GeneID (NCBI):
2521

Full Name:
fusion (involved in t(12;16) in malignant liposarcoma)

Calculated MW:
75 kDa

Observed MW:
68-75 kDa

Purification Method:
Protein G purification

CloneNo.:
3A10B5

Recommended Dilutions:
WB 1:5000-1:50000
IP 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate
IHC 1:500-1:2500
IF 1:20-1:200

Applications

Tested Applications:
FC, IF, IHC, IP, WB, ELISA

Cited Applications:
IF, IHC, IP, RIP, WB

Species Specificity:
human, mouse, rat, pig

Cited Species:
human, mouse, Drosophila

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 : HepG2 cells, HeLa cells, HL-60 cells

IP : HeLa cells,

IHC : human gliomas tissue, human colon tissue, human brain (FTLD) tissue, human ovary tumor tissue

IF : human brain(ALS) tissue, HeLa cells

Background Information

FUS (also named TLS and POMp75) belongs to the RRM TET family. FUS may play a role in the maintenance of genomic integrity; it binds both single-stranded and double-stranded DNA and promotes ATP-independent annealing of complementary single-stranded DNAs and D-loop formation in superhelical double-stranded DNA. FUS is also an RNA-binding protein, and its links to neurodegenerative disease proffer the intriguing possibility that altered RNA metabolism or RNA processing may underlie or contribute to neuron degeneration. Two research groups simultaneously reported that FUS is present in 5% of the pathalogical aggregations (inclusions) seen in familial amyotrophic sclerosis (fALS). FUS-positive inclusions were also reported in cases of sporadic ALS (sALS). More recently, wild-type FUS has also been implicated in the pathological development of frototemporal lobar dementia (FTLD) with ubiquitin-positive inclusions (FTLD-U), further linking FUS to the pathogenesis of neurogenerative diseases. There is some debate as to whether FUS colocalizes with TDP-43 in TDP-43-positive cases of ALS and whether TDP-43 and FUS cause neurodegenerative disease independently or contributively of one another. This antibody is a mouse monoclonal antibody raised against an internal region of human FUS. Initial reports from our customers suggest this new monoclonal FUS antibody (60160-1-Ig) is a useful tool in ALS and FTLD research. For more details, please see our blog article regarding the matter.

Notable Publications

Author	Pubmed ID	Journal	Application
Helena Gossye	36171642	Brain	IHC
Liang Lu	25239623	J Biol Chem	WB
Bo Hu	27615052	Ann Neurol	WB,IF

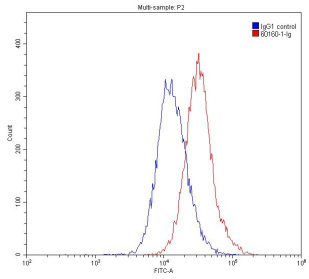
Storage

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

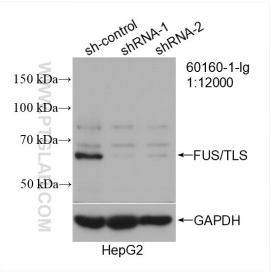
***** 20ul sizes contain 0.1% BSA**

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

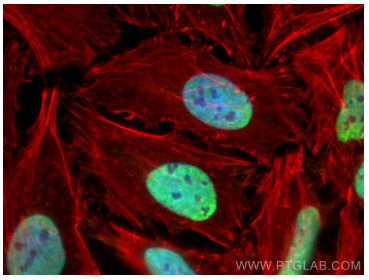
Selected Validation Data



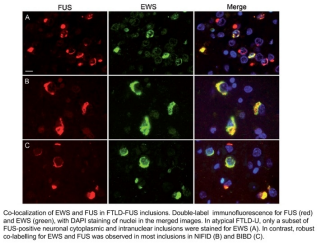
1X10^6 K-562 cells were stained with 0.20ug FUS/TLS antibody (60160-1-Ig, red) and control antibody (blue). Fixed with 90% MeOH.



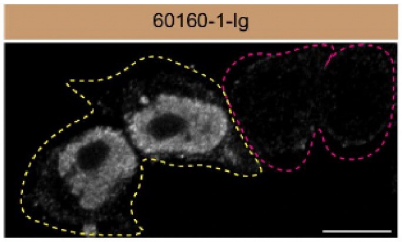
WB result of FUS/TLS antibody (60160-1-Ig; 1:12000; incubated at room temperature for 1.5 hours) with sh-Control and sh-FUS/TLS transfected HepG2 cells.



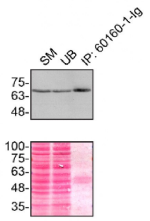
Immunofluorescent analysis of (4% PFA) fixed HeLa cells using FUS/TLS antibody (60160-1-Ig, Clone: 3A10B5) at dilution of 1:800 and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L), CL594-Phalloidin (red).



IF result of McAB FUS (60160-1-Ig) in the Paper "FET proteins TAF15 and EWS are selective markers that distinguish FTLD with FUS pathology from amyotrophic lateral sclerosis with FUS mutations" from Manuela Neumann.

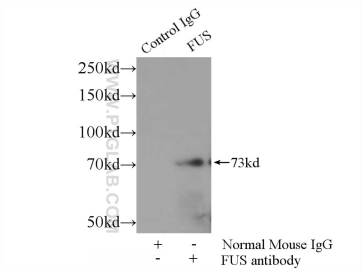


HeLa WT cells (yellow outline) and FUS KO cells (red outline) labelled with a green or a far-red fluorescence dye, respectively. Cells fixed with 4% PFA and stained with 60160-1-Ig at 1:2000 plus DAPI. Bars = 10 µm. Data provided by YCharOS, an open science company with a mission to validate commercial antibodies to improve scientific reproducibility and transparency.

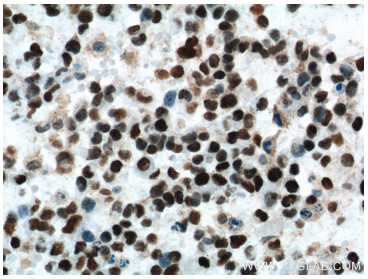


SM=10% starting material;
UB=10% unbound fraction;
IP=immunoprecipitate.

HeLa lysates prepared and IP of FUS performed using 1.0 µg of 60160-1-Ig coupled to protein G-Sepharose beads. The Ponceau stained transfers of each blot are shown. Data provided by YCharOS, an open science company with a mission to validate commercial antibodies to improve scientific reproducibility and transparency.



IP Result of anti-FUS/TLS (IP:60160-1-Ig, 4ug; Detection:60160-1-Ig 1:10000) with HeLa cells lysate 920ug.



Immunohistochemical analysis of paraffin-embedded human gliomas tissue slide using 60160-1-Ig (FUS/TLS Antibody) at dilution of 1:1000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).