

For Research Use Only

# FUS/TLS Monoclonal antibody

Catalog Number: 60160-1-Ig

Featured Product

20 Publications



## Basic Information

**Catalog Number:**

60160-1-Ig

**Size:**

1000 µg/ml

**Source:**

Mouse

**Isotype:**

IgG1

**Immunogen Catalog Number:**

AG2150

**GenBank Accession Number:**

BC026062

**GeneID (NCBI):**

2521

**UNIPROT ID:**

P35637

**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 µg 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/ICC, 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 pathological 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 frontotemporal lobar dementia (FTLD) with ubiquitin-positive inclusions (FTLD-U), further linking FUS to the pathogenesis of neurodegenerative 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

For technical support and original validation data for this product please contact:

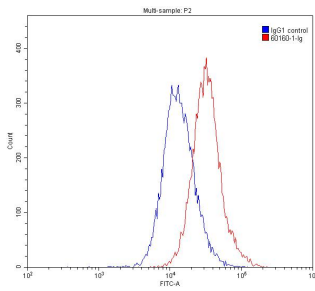
T: 4006900926

E: Proteintech-CN@ptglab.com

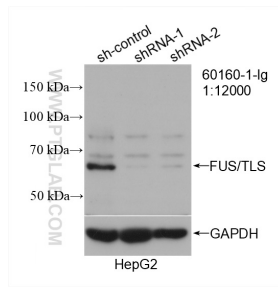
W: ptgcn.com

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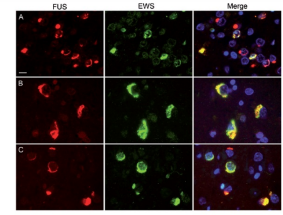
## Selected Validation Data



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

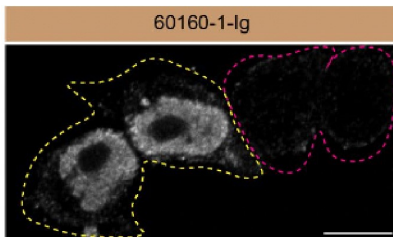


WB result of FUS/TLS antibody (60160-1-Ig; 1:12000; incubated at room temperature for 1.5 hours) with sh-Control and sh-FUS/TLS transfected HepG2 cells.

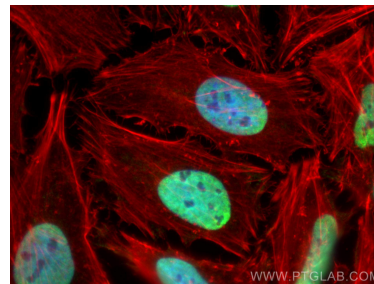


Colocalization of EWS and FUS in FTLD-FUS inclusions. Double-label immunofluorescence for FUS (red) and EWS (green), with DAPI staining of nuclei in the merged images. In atypical FTLD-L1, only a subset of FUS-positive neuronal cytoplasmic and intraneuronal inclusions were stained for EWS (A). In contrast, robust co-labeling for EWS and FUS was observed in most inclusions in NFD (B) and BBD (C).

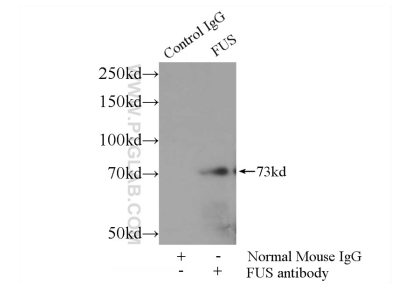
IF result of McAB FUS (60160-1-Ig) in the Paper "FET proteins TAF15 and EWS are selective markers that distinguish FTLD with FUS pathology from amyotrophic lateral sclerosis with FUS mutations" from Manuela Neumann.



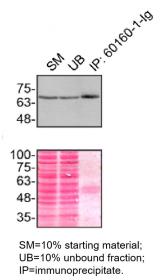
HeLa WT cells (yellow outline) and FUS KO cells (red outline) labelled with a green or a far-red fluorescence dye, respectively. Cells fixed with 4% PFA and stained with 60160-1-Ig at 1:2000 plus DAPI. Bars = 10  $\mu$  m. Data provided by YCharOS, an open science company with a mission to validate commercial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



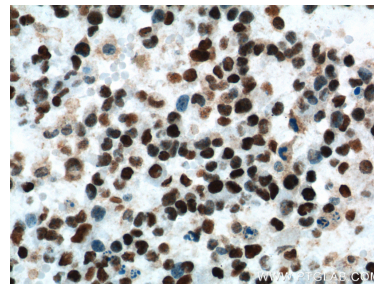
Immunofluorescent analysis of (4% PFA) fixed HeLa cells using FUS/TLS antibody (60160-1-Ig, Clone: 3A10B5) at dilution of 1:800 and CoraLite@488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L), CL594-Phalloidin (red).



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



HeLa lysates prepared and IP of FUS performed using 1.0  $\mu$  g 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.



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).