For Research Use Only

CoraLite® Plus 488-conjugated SFPQ Monoclonal antibody

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Antibodies | ELISA kits | Proteins
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Catalog Number:CL488-67129

Basic Information

Catalog Number:
CL488-67129

Size:
100ul , Concentration: 1000 μg/ml by Nanodrop;

Source:
Mouse

Isotype:
IgG1

Immunogen Catalog Number:
AG7181

GenBank Accession Number:
BC051192

GeneID (NCBI):
6421

Full Name:
splicing factor proline/glutamine-rich (polypyrimidine tract binding protein associated)

Calculated MW:
76 kDa

Observed MW:
90-100 kDa

Purification Method:
Protein G purification

CloneNo.:
1G4A5

Excitation/Emission maxima wavelengths:
493 nm / 522 nm

Applications

Tested Applications:
FC (Intra)

Species Specificity:
Human, mouse, rat

Background Information

SFPQ, also named PSF, encodes a nuclear factor implicated in the splicing and regulation of gene expression. SFPQ probably forms a heteromer with NONO and participates in DNA pairing and DNA break repair program. Very recently SFPQ was identified as a downstream target of tau, complete nuclear depletion and cytoplasmic accumulation of SFPQ were shown in the neurons and astrocytes of brains with Alzheimer's disease (AD), more strikingly, reduced SFPQ levels may progress together with tau pathology, these observation strongly suggests the important role of SFPQ pathology in neurodegenerative diseases including AD. SFPQ encompasses 707 amino acids and has a molecular weight of 76 kDa, although it typically migrates on a sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE) gel at an apparent molecular weight of 100 kDa. Proteolytic cleavage products of apparent molecular weights of 47 and 68 kDa, and an alternatively spliced form of 669 amino acids, have also been described in various cell types. (PMID: 25832716). Splicing Factor Proline and Glutamine rich (SFPQ) as the most significant intron-retaining transcript across diverse ALS-causing mutations (VCP, SOD1 and FUS). SFPQ protein binds extensively to its retained intron, which exhibits high cytoplasmic abundance in VCP mutation compared with controls. Crucially, the protein is less abundant in the nuclei of VCP mutation cultures and is ultimately lost from nuclei of MNs in mouse models (SOD1mu and VCP mutation transgenic mouse models) and human sporadic ALS post-mortem samples. In summary, our study implicates SFPQ IR and nuclear loss as general molecular hallmarks of familial and sporadic ALS.

Storage

Storage:
Store at -20°C. Avoid exposure to light. Stable for one year after shipment.
Storage Buffer:
PBS with 50% Glycerol, 0.05% Proclin300, 0.5% BSA, 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
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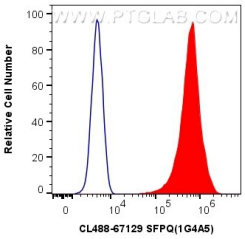
Selected Validation Data



1X10^6 HeLa cells were intracellularly stained with 0.4 ug CoraLite® Plus 488 Anti-Human SFPQ (CL488-67129, Clone:1G4A5) (red), or 0.4 ug CoraLite® Plus 488 Mouse IgG1 Isotype Control (MOPC-21) (CL488-65124, Clone: MOPC-21) (blue). Cells were fixed and permeabilized with Transcription Factor Staining Buffer Kit (PF00011).