For Research Use Only

SFPQ Monoclonal antibody

Catalog Number:67129-1-Ig Featured Product 3 Publications

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Basic Information

Catalog Number:
67129-1-Ig

Size:
150ul , Concentration: 1000 ug/ml by Nanodrop and 514 ug/ml by Bradford method using BSA as the standard;

Source:
Mouse

Isotype:
IgG1

Immunogen Catalog Number:
AG7181

GenBank Accession Number:
BC051192

GeneID (NCBI):
6421

UNIPROT ID:
P23246

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

Calculated MW:
76 kDa

Observed MW:
90-100 kDa

Purification Method:
Protein A purification

CloneNo.:
1G4A5

Recommended Dilutions:
WB 1:5000-1:50000
IHC 1:2000-1:8000
IF/ICC 1:400-1:1600

Applications

Tested Applications:
WB, IHC, IF/ICC, FC (Intra), ELISA

Cited Applications:
WB, IF

Species Specificity:
human, mouse, rat

Cited Species:
human, 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 : U-251 cells, HSC-T6 cells, HeLa cells, Jurkat cells, PC-3 cells, HEK-293 cells, NIH/3T3 cells, A431 cells, LNCaP cells, K-562 cells

IHC : rat stomach tissue, human colon cancer tissue, human lung cancer tissue, human pancreas cancer tissue, mouse brain tissue, mouse stomach tissue, rat brain tissue

IF/ICC : HeLa cells, MCF-7 cells

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.

Notable Publications

Author	Pubmed ID	Journal	Application
Katherine L Harper	39592606	Nat Commun	WB,IF
Libang Yang	39201453	Int J Mol Sci	WB
Libang Yang	37569873	Int J Mol Sci	WB

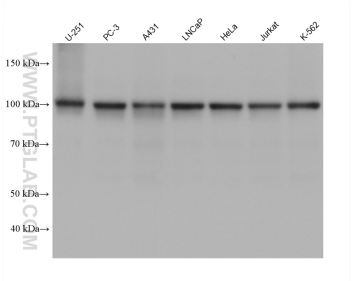
Storage

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

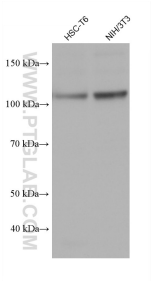
*** 20ul sizes contain 0.1% BSA

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 67129-1-Ig (SFPQ antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours.



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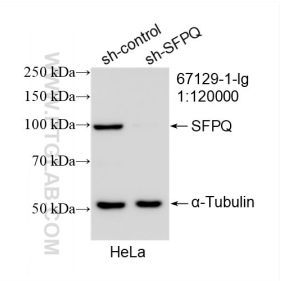
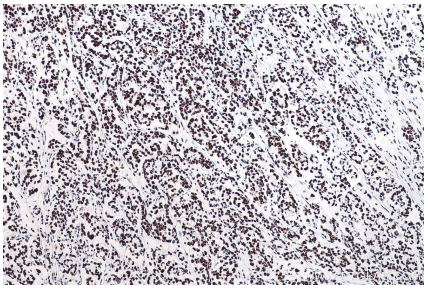
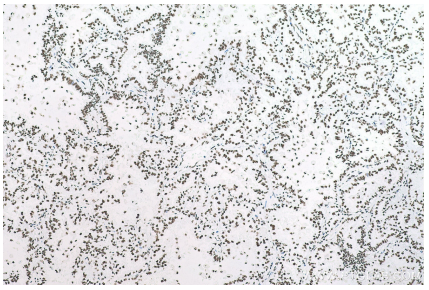


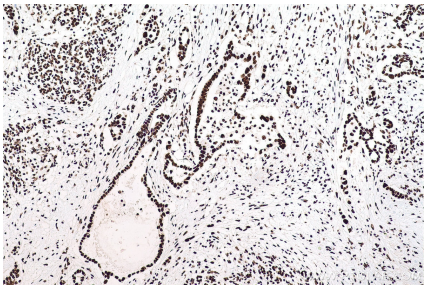
WB result of SFPQ antibody (67129-1-Ig; 1:120000; incubated at room temperature for 1.5 hours) with sh-Control and sh-SFPQ transfected HeLa cells.



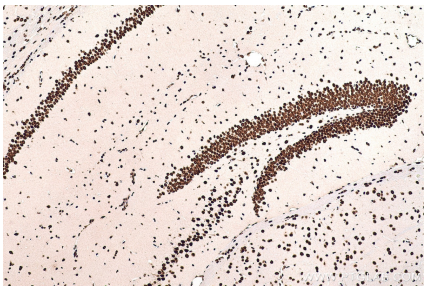
Immunohistochemical analysis of paraffin-embedded human colon cancer tissue slide using 67129-1-Ig (SFPQ antibody) at dilution of 1:4000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



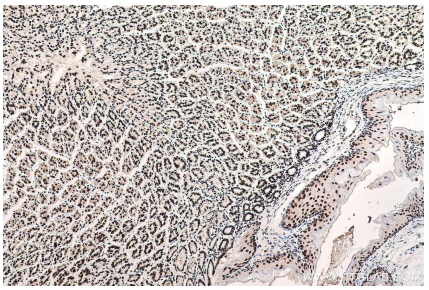
Immunohistochemical analysis of paraffin-embedded human lung cancer tissue slide using 67129-1-Ig (SFPQ antibody) at dilution of 1:4000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



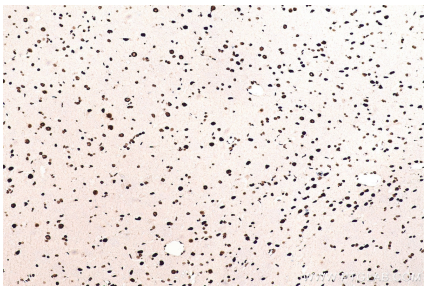
Immunohistochemical analysis of paraffin-embedded human pancreas cancer tissue slide using 67129-1-Ig (SFPQ antibody) at dilution of 1:4000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



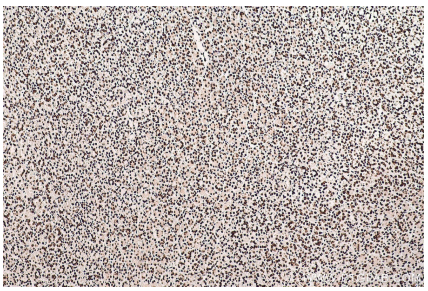
Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 67129-1-Ig (SFPQ antibody) at dilution of 1:4000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).

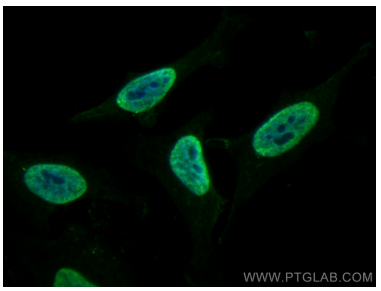


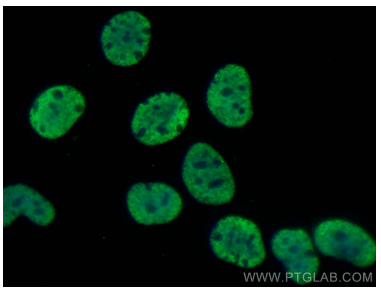
Immunohistochemical analysis of paraffin-embedded mouse stomach tissue slide using 67129-1-Ig (SFPQ antibody) at dilution of 1:4000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded rat brain tissue slide using 67129-1-Ig (SFPQ antibody) at dilution of 1:4000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



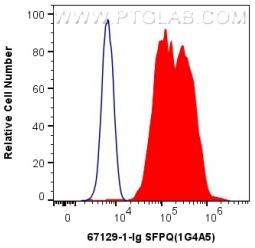




Immunohistochemical analysis of paraffin-embedded rat stomach tissue slide using 67129-1-Ig (SFPQ antibody) at dilution of 1:4000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).

Immunofluorescent analysis of (4% PFA) fixed HeLa cells using SFPQ antibody (67129-1-Ig, Clone: 1G4A5) at dilution of 1:800 and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L).

Immunofluorescent analysis of (4% PFA) fixed MCF-7 cells using SFPQ antibody (67129-1-Ig, Clone: 1G4A5) at dilution of 1:800 and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L).



1X10^6 HeLa cells were intracellularly stained with 0.4 ug Anti-Human SFPQ (67129-1-Ig, Clone:1G4A5) and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L) at dilution 1:1000 (red), or 0.4 ug Isotype Control. Cells were fixed and permeabilized with Transcription Factor Staining Buffer Kit (PF00011).