



Anti-SFPQ monoclonal antibody, clone C03 (DCABH-742)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	Mouse monoclonal to SFPQ
Antigen Description	<p>DNA- and RNA binding protein, involved in several nuclear processes. Essential pre-mRNA splicing factor required early in spliceosome formation and for splicing catalytic step II, probably as an heteromer with NONO. Binds to pre-mRNA in spliceosome C complex, and specifically binds to intronic polypyrimidine tracts. Interacts with U5 snRNA, probably by binding to a purine-rich sequence located on the 3' side of U5 snRNA stem 1b. May be involved in a pre-mRNA coupled splicing and polyadenylation process as component of a snRNP-free complex with SNRPA/U1A. The SFPQ-NONO heteromer associated with MATR3 may play a role in nuclear retention of defective RNAs. SFPQ may be involved in homologous DNA pairing; in vitro, promotes the invasion of ssDNA between a duplex DNA and produces a D-loop formation. The SFPQ-NONO heteromer may be involved in DNA unwinding by modulating the function of topoisomerase I/TOP1; in vitro, stimulates dissociation of TOP1 from DNA after cleavage and enhances its jumping between separate DNA helices. The SFPQ-NONO heteromer may be involved in DNA nonhomologous end joining (NHEJ) required for double-strand break repair and V(D)J recombination and may stabilize paired DNA ends; in vitro, the complex strongly stimulates DNA end joining, binds directly to the DNA substrates and cooperates with the Ku70/G22P1-Ku80/XRCC5 (Ku) dimer to establish a functional preligation complex. SFPQ is involved in transcriptional regulation. Transcriptional repression is probably mediated by an interaction of SFPQ with SIN3A and subsequent recruitment of histone deacetylases (HDACs). The SFPQ-NONO/SF-1 complex binds to the CYP17 promoter and regulates basal and cAMP-dependent transcriptional activity. SFPQ isoform Long binds to the DNA binding domains (DBD) of nuclear hormone receptors, like RXRA and probably THRA, and acts as transcriptional corepressor in absence of hormone ligands. Binds the DNA sequence 5-CTGAGTC-3 in the insulin-like growth factor response element (IGFRE) and inhibits IGF-I-stimulated transcriptional activity.</p>
Specificity	By immunoblotting of mouse cells of immature myeloid origin (bone marrow and acute myeloid leukemia), the antibody identifies a 47 kDa protein, with an apparent M.W. of 49 kDa. In

lymphoid cells, peripheral blood cells and other tissues, it recognizes a m

Immunogen	Tissue/ cell preparation (lysate of mouse bone marrow-derived stromal cell line.).
Isotype	IgG1
Source/Host	Mouse
Species Reactivity	Mouse, Human
Clone	C03
Conjugate	Unconjugated
Applications	ICC/IF, IP, RIA, ICC, IHC-Fr, WB
Positive Control	Whole extract of cultured HeLa cells.
Format	Liquid
Size	50 µl
Buffer	Preservative: 15mM Sodium Azide; Constituents: 0.01M PBS, pH 7.4
Preservative	15mM Sodium Azide
Storage	Store at +4°C short term (1-2 weeks). Aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

GENE INFORMATION

Gene Name	Sfpq splicing factor proline/glutamine rich (polypyrimidine tract binding protein associated) [Mus musculus]
Official Symbol	SFPQ
Synonyms	SFPQ; splicing factor proline/glutamine rich (polypyrimidine tract binding protein associated); splicing factor, proline- and glutamine-rich; PTB-associated splicing factor; PTB-associated-splicing factor; DNA-binding p52/p100 complex, 100 kDa subunit; po
Entrez Gene ID	71514
Protein Refseq	NP_076092
UniProt ID	Q8VIJ6
Pathway	mRNA processing, organism-specific biosystem;

Function

DNA binding; RNA binding; nucleic acid binding; nucleotide binding; protein binding;
