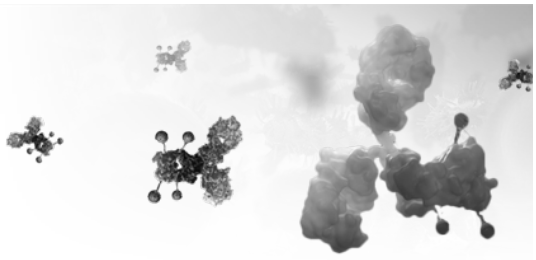

Human SFPQ peptide (DAG-P1971)

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

PRODUCT INFORMATION

Antigen Description	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 avtivity. 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.
Conjugate	Unconjugated
Sequence Similarities	Contains 2 RRM (RNA recognition motif) domains.
Format	Liquid

45-1 Ramsey Road, Shirley, NY 11967, USA
Email: info@creative-diagnostics.com
Tel: 1-631-624-4882 Fax: 1-631-938-8221

Preservative	None
Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles. Information available upon request.

GENE INFORMATION

Gene Name	SFPQ splicing factor proline/glutamine-rich [Homo sapiens (human)]
Official Symbol	SFPQ
Synonyms	SFPQ; splicing factor proline/glutamine-rich; PSF; POMP100; splicing factor, proline- and glutamine-rich; hPOMp100; 100 kDa DNA-pairing protein; PTB-associated splicing factor; PTB-associated-splicing factor; DNA-binding p52/p100 complex, 100 kDa subunit; polypyrimidine tract binding protein associated; polypyrimidine tract-binding protein-associated splicing factor; polypyrimidine tract-binding protein-associated-splicing factor; splicing factor proline/glutamine rich (polypyrimidine tract binding protein associated); splicing factor proline/glutamine rich (polypyrimidine tract-binding protein-associated);
Entrez Gene ID	6421
mRNA Refseq	NM_005066.2
Protein Refseq	NP_005057.1
UniProt ID	P23246
Chromosome Location	1p34.3
Pathway	mRNA processing, organism-specific biosystem;
Function	DNA binding; nucleotide binding; poly(A) RNA binding; protein binding;

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