

Product datasheet for **RC221040**

Smek1 (PPP4R3A) (NM_032560) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Smek1 (PPP4R3A) (NM_032560) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Smek1
Synonyms:	FLFL1; KIAA2010; MSTP033; PP4R3A; smk-1; smk1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide
Sequence:

>RC221040 representing NM_032560
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGCATCGCC**

ATGACCGACACCCGGCGGGTGAAGGTGTACACGCTCAACGAGGACCGGCAGTGGGACGACCGGGCA
CCGGGCATGTGTCTGGCTACGTGGAGCGGCTGAAGGCATGTCCCTGCTTGTGAGGGCTGAGAGCGA
CGTTCTCTACTTTAGAGTCGAAAATAAATCCTAACACTGCATACCAGAAAACAAGGACTCTGATT
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TAGAAAATGAGGGTTATATTAAGAGCTCTGGAGCTTTTCATGTGTGAAGATTTGGAAAATATTGA
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CAGACTGCCCAACTATTGGCACTTGTATTGGAATTGTTAACATTTTGTGTGGAGCACCATACCTACCACA
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ATTTGATTCA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC221040 representing NM_032560
 Red=Cloning site Green=Tags(s)

MTDTRRRVKVYTLNEDRQWDDRGTGHVSSGYVERLKGMSLLVRAESDGSLLLESKINPNTAYQKQDTLI
 VWSEAEYDLALSFQEKAGCDEIWEKICQVQKDPVSDITQDLVDESEERFDDMSSPGLLELPSCELSRL
 EEIAELVASSLPSPLRREKLALALENEGVIKLELHFVCELENIEGLHHLYEIIKGFLLNRTALFEV
 MFSEECIMDVIGCLEYDPALSQPRKHREFLTAKFKEVIPISDPELKQKIHQTYRVQYIQDMVLPSPV
 FEENMLSTLHSFIFFNKVEIVGMLQEDEKFLTDLFAQLTDEATDEEKRQELVNFLKEFCAFSQTLPQNR
 DAFFKTL SNMGILPALEVILGMDDTQVRSAAATDIFSYLEYNPSMVREFVMQEAQQNDDILLINLIEH
 MICDTPDELGGAVQLMGLLRTLVDPENMLATANKTEKTEFLGFFYKHCMHVLTAPLLANTTEDKPSKDDF
 QTAQLLALVLELLTFCVEHHTYHIKNYIINKDILRRVLVLMASKHAFALCALRFKRKIIGLKDEFYNRY
 IMKSFLFEPVVKAFLNNGSRYNLMNSAIIEMFEFIRVEDIKSLTAHVNIENYKALEVDVYVQTFKGLKLR
 FEQQRERQDNPKLDSMRSILRNHRYRRDARTLEDEEEMWFNTDEDDMEDGEAVVSPDKTKNDDDIMDPI
 SKFMERKKLKESEEKVELLKTNL SGRQSPSFKLSLSSGKTNLTSQSSTNLPSPGSPGSPGSPGSPGS
 VPKNTSQTAAITTKGGLVGLVDYPDDDEDDDEDEDKEDTLPLSKKAKFDS

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6205_d09.zip

Restriction Sites: Sgfl-Mlul

Cloning Scheme:



- ACCN:** NM_032560
- ORF Size:** 2460 bp
- OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)
- OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
- Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_032560.4](#)

RefSeq Size: 4449 bp

RefSeq ORF: 2462 bp

Locus ID: 55671

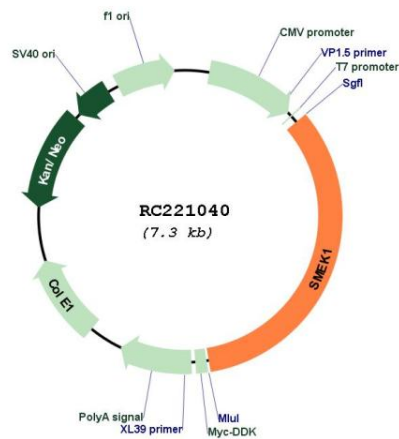
Cytogenetics: 14q32.12

Domains: DUF625

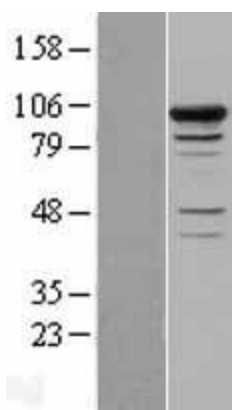
MW: 93.7 kDa

Gene Summary: Regulatory subunit of serine/threonine-protein phosphatase 4. May regulate the activity of PPP4C at centrosomal microtubule organizing centers. The PPP4C-PPP4R2-PPP4R3A PP4 complex specifically dephosphorylates H2AFX phosphorylated on 'Ser-140' (gamma-H2AFX) generated during DNA replication and required for DNA DSB repair.[UniProtKB/Swiss-Prot Function]

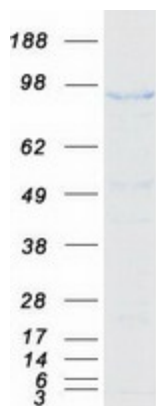
Product images:



Circular map for RC221040



Western blot validation of overexpression lysate (Cat# [LY403177]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC221040 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SMEK1 protein (Cat# [TP321040]). The protein was produced from HEK293T cells transfected with SMEK1 cDNA clone (Cat# RC221040) using MegaTran 2.0 (Cat# [TT210002]).