

## Product datasheet for **RG239025**

### Smek1 (PPP4R3A) (NM\_001284281) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Smek1 (PPP4R3A) (NM_001284281) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Smek1
Synonyms:	FLFL1; KIAA2010; MSTP033; PP4R3; PP4R3A; SMEK1; smk-1; smk1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG239025 representing NM\_001284281.  
 Blue=ORF Red=Cloning site Green=Tag(s)

```
GCTCGTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGCACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGACCGACACCCGGCGGGTGAAGGTGTACACGCTCAACGAGACCGGCAGTGGGACGACCGGGGC
ACCGGCATGTGCTGCTGGCTACGTGGAGCGGCTGAAGGCATGTCCCTGCTTGTGAGGGCTGAGAGC
GACGGTTCTCTACTTTTAGAGTCGAAAATAAATCCTAACACTGCATACCAGAAACACAGGAAGATGAA
AAATTTCTGACAGATTTGTTTGCACAATAACAGATGAAGCAACAGATGAGGAAAAAAGACAGGAATTG
GTTAACTTTTTAAAGAATTTTGTGCGTTTTCCAAAACGTACAGCCTCAAAACAGAGATGCTTTTTTC
AAGACTTTGTCAAACATGGGCATATTACCAGCTTTAGAAGTATCCTTGGCATGGATGATACACAGGTG
CGAAGTGTGCTACTGATATATTCTCACTTGGTTGAATATAATCCATCCATGGTACGAGATTTGTC
ATGCAGGAGGCACAACAGAATGATGATGAAGTAAGAAGTTAACAGAGCAAAAAATAACAGCAAGGAT
ATTTTGTCTCATCAACCTCATTATAGAACATATGATTTGTGATACAGATCCTGAACCTGGAGGAGCAGTC
CAGCTTATGGGCCTGCTTCGAACCTTAGTTGACCCAGAGAACATGCTAGCCACTGCCAATAAAACAGAA
AAGACTGAATTTCTGGGTTTCTTCTACAAGCACTGTATGCATGTTCTCACTGCTCCTTTACTAGCAAT
ACAACAGAAGACAACCTAGTAAAGATGATTTTCAGACTGCCCAACTATTGGCACTTGTATTGGAATTG
TTAACATTTTGTGTGGAGCACCATACCTACCACATAAAGAATACTATTATAAAGGATATCCTCCGG
AGAGTGTAGTCTTATGGCCTCGAAGCATGCTTTCTTGGCATTATGTGCCCTTCGTTTTAAAGAAAG
ATTATTGGATTAAGAGATGAGTTTTACAACCGCTACATAATGAAAAGTTTTTTGTTTGAACCAAGTAGTG
AAAGCATTTCTCAACAATGGATCCCGCTACAATCTGATGAACTGCCCATAATAGAGATGTTTGAATTT
ATTAGAGTGAAGATATAAAATCATTAACTGCTCATGTAATTGAAAATTAAGGAAAGCACTGGAAGAT
GTAGATTATGTACAGACATTTAAAGGATTAATAACTGAGATTTGAACAACAAGAGAAAGCAAGATAAT
CCCAAACCTTGACAGTATGCGTTCATTTTGAAGGAATCACAGATATCGAAGAGATGCCAGAACACTAGAA
GATGAAGAAGAGATGTGGTTTAAACACAGATGAAGATGACATGGAAGATGGAGAAGCTGTAGTGTCTCCA
TCTGACAAAATAAAATGATGATGATATTATGGATCCAATAAGTAAATTCATGGAAGGAAAGAAATTA
AAAGAAAGTGAAGAAAAGGAAGTCTTCTGAAAACAAACCTTTCTGGACGGCAGAGCCCAAGTTTCAAG
CTTTCCCTGTCCAGTGAACGAAGACTAACCTCACCAGCCAGTCATCTACAACAATCTGCCTGTTTCT
CCGGGATCACCTGGATCCCAGGATCTCCAGGCTCTCCTGGATCCGTACCTAAAAATACATCTCAGACG
GCAGCTATTACTACAAAGGGAGGCTCGTGGGTCTGGTAGATTATCCTGATGATGATGAAGATGATGAT
GAGGATGAAGATAAGGAAGATACGTTACCATTGTCAAAGAAAGCAAAATTTGATTCA
ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAAAC
```

**Protein Sequence:**

>Peptide sequence encoded by RG239025  
 Blue=ORF Red=Cloning site Green=Tag(s)

```
MTDTRRRVQVYTLNEDRQWDRGTGHVSSGYVERLKGMSLLVRAESDGSLLLLESKINPNTAYQKQDEE
KFLTDLFAQLTDEATDEEKRQELVNFLKEFCASQTLQPQNRDAFFKTLNMGILPALEVLGMDDTQV
RSAATDIFSYLEYNPSMVREFVMQEAQNDVSKKLETKITSKDILLINLIEHMICDTPDELGGAV
QLMGLLRTLVDPENMLATANKTEKTEFLGFFYKHCMHVLTAPLLANTTEDKPSKDDFQTAQLLALVLEL
LTFCEVHHYHIKNYIINKDILRRVLVLMASKHAFLALCALRFKRKIIGLKDEFYNRYIMKSFLFEPVV
KAFLNNGSRYNLMNSAIIEMFEFIRVEDIKSLTAHVNIENYKALEVDVYVQTFKGLKLRFEQQRERQDN
PKLDSMRSLRNHRYRRDARTLEDEEEMWFNTDEDDMEDGEAVVSPSDKTKNDDIMDPI SKFMERKKL
KESEEKEVLLKTNLSGRQSPFKLSLSSGKTNLTSQSSTNLPSPGSPGSPGSPGSPGSPGSPVKNSTQT
AAITTKGGLVGLVDYPDDEDDDEDEDKEDTLP LSKKAFDS
TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV
MGYGFYHFGTYPSTYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED
SVIFTDKIIIRSNAIVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVDSHMFKSAIHPSILQNGGPMFA
FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV
```

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_001284281

**ORF Size:** 1782 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).

**RefSeq:** [NM\\_001284281.1](#), [NP\\_001271210.1](#)

**RefSeq Size:** 3896 bp

**RefSeq ORF:** 1785 bp

**Locus ID:** 55671

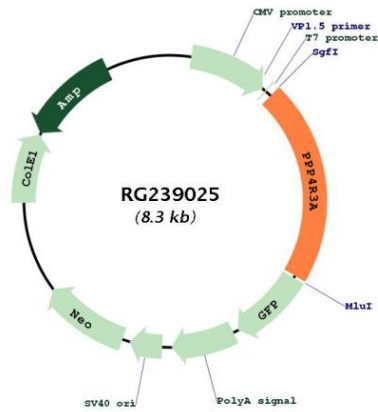
**UniProt ID:** [Q6IN85](#)

**Cytogenetics:** 14q32.12

**MW:** 68.3 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 RG239025