

## Product datasheet for **RG239703**

### TOP3B (NM\_001282112) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	TOP3B (NM_001282112) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	TOP3B
Synonyms:	TOP3B1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG239703 representing NM\_001282112.  
 Blue=ORF Red=Cloning site Green=Tag(s)

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GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGACTG
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GTCTTCCAGGAGCTGGTGGAGCTGAAGCATGCGGCCTCCTGCCACCCATGCACCGCGTGGACAGGG
AGAAGGCAGGGTCGAGGGCGGGCCGGGCCAGGAGGCCCTGGGAAGCCCAACCCAGACGGCCCAAG
GACAAGATGTCAGCCCTGGCCGCTACTTTGTA
AGCGGACCGACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC
  
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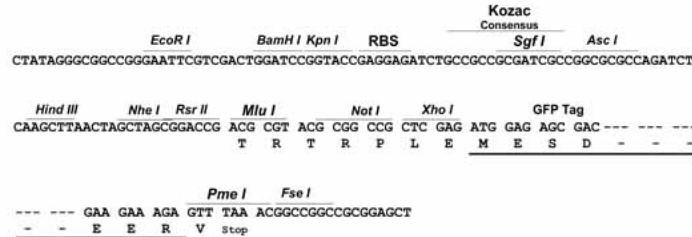
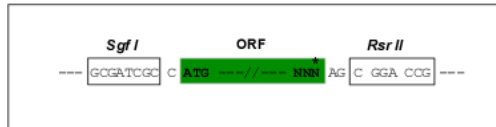
**Protein Sequence:** >Peptide sequence encoded by RG239703  
Blue=ORF Red=Cloning site Green=Tag(s)

MKTVLMVAEKPSLAQSIKILSRGSLSSHKGLNGACSVHEYTGTFFAGQPVRFKMTSVCGHVMTLDFLGK  
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ENFDLKGSLRQQANHPYWADTVKRLLAEGINRPRKGDAGDHPPITPMKSATEAELGGDAWRLYEYITR  
HFIAVSHDCKYLQSTISFRIGPELFTCSGKTVLSPGFTEVMPWQSVPLEESLPTCQRGDAFPVGEVKM  
LEKQTNPPDYL TEAELITLMEKHGIGTDASIPVHINNICQRNYVTVESGRRLKPTNLGIVLVHGYKID  
AELVLPTIRSAVEKQLNLIAQGKADYRQVLGHTLDVFKRKFHYFVDSIAGMDELMEVSFSPLAATGKPL  
SRCGKCHRFMKYIQAKPSRLHCSHCDETYTLPQNGTIKLYKELRCPLDDFELVLWSSGSRGKSYPLCPY  
CYNHPPFRDMKKGMGCNECTHPSCQHLSMLGIGQCVCESGVLVDPTSGPKWKVACNKCNVVAHCFE  
NAHRVRSADTCSVCEAALLDVFNFKAKSPLPGDETQHMGCVFCDPVFQELVELKHAASCHPMHRRGGPG  
RRQGRGRGRARRPPGKPNRRPKDKMSALAAFYV  
SGPTRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGGEGTPEQGRMTNKMKSTKGALTFSPYLL  
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PEDSVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRTFLRDGGYSSVVDSHMHFKSAIHPSILQNGGP  
MFAFRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV

**Restriction Sites:** Sgfl-RsrII

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:


**ACCN:** NM\_001282112

**ORF Size:** 2586 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).

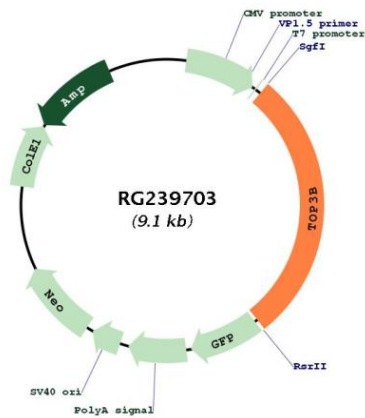
**RefSeq:** [NM\\_001282112.2](#)
**RefSeq Size:** 2908 bp

**RefSeq ORF:** 2589 bp

**Locus ID:** 8940  
**UniProt ID:** [O95985](#)  
**Cytogenetics:** 22q11.22  
**Protein Pathways:** Homologous recombination  
**MW:** 96.7 kDa

**Gene Summary:** This gene encodes a DNA topoisomerase, an enzyme that controls and alters the topologic states of DNA during transcription. This enzyme catalyzes the transient breaking and rejoining of a single strand of DNA which allows the strands to pass through one another, thus relaxing the supercoils and altering the topology of DNA. The enzyme interacts with DNA helicase SGS1 and plays a role in DNA recombination, cellular aging and maintenance of genome stability. Low expression of this gene may be related to higher survival rates in breast cancer patients. This gene has a pseudogene on chromosome 22. Alternate splicing results in multiple transcript variants. Additional alternatively spliced transcript variants of this gene have been described, but their full-length nature is not known. [provided by RefSeq, Aug 2013]

**Product images:**



Circular map for RG239703