

Product datasheet for **RG218947**

SMOX (NM_175839) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SMOX (NM_175839) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	SMOX
Synonyms:	C20orf16; PAO; PAO-1; PAO1; PAOH; PAOH1; SMO
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG218947 representing NM_175839
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGCAAAGTTGTGAATCCAGTGGTGACAGTGCGGATGACCCTCTCAGTCGCGCCTACGGAGAAGGGGAC
 AGCCTCGTGTGGTGTATCGGCCCGGCTTGGCTGGCCTGGCTGCAGCCAAAGCACTTCTTGGAGAGG
 TTTCACGGATGCTACTGTGCTTGAAGCTTCCAGCCACATCGGAGGCCGTGTGCAGAGTGTAAACTTGA
 CACGCCACCTTTGAGCTGGGAGCCACCTGGATCCATGGCTCCCATGGAAACCCTATCTATCATCTAGCAG
 AAGCCAACGGCCTCCTGGAAGAGACAACCGATGGGGAACGCAGCGTGGGCCGCATCAGCCTCTATCCAA
 GAATGGCGTGGCCTGCTACCTTACCAACCACGGCCGAGGATCCCCAAGGACGTGGTTGAGGAATTCAGC
 GATTTATACAACGAGGTCTAATACTTGACCCAGGAGTTCTTCCGGCACGATAAACAGTCAATGCTGAAA
 GTCAAAATAGCGTGGGGTGTTCACCCGAGAGGAGGTGCGTAACCGCATCAGGAATGACCCTGACGACCC
 AGAGGCTACCAAGCGCCTGAAGCTCGCCATGATCCAGCAGTACCTGAAGTGGAGAGCTGTGAGAGCAGC
 TCACACAGCATGGACGAGGTGTCCCTGAGCGCCTTCGGGGAGTGGACCGAGATCCCCGGCGCTCACCACA
 TCATCCCCTCGGGCTTCATGCGGGTGTGGAGCTGCTGGCGGAGGGCATCCCTGCCACGTCATCCAGCT
 AGGGAACCTGTCCGCTGCATTCAGTGGGACCAGGCCTCAGCCCGCCCCAGAGGCCCTGAGATTGAGCCC
 CGGGGTGAGGGGACCAATCACGACACTGGGGAGGGTGGCCAGGGTGGAGAGGAGCCCCGGGGGGCA
 GGTGGGATGAGGATGAGCAGTGGTGGTGGTGGAGTGCAGGACTGTGAGCTGATCCCGCGGACCA
 TGTGATTGTGACCGTGTGCTAGGTGTGCTAAAGAGGCAGTACACCAGTTTCTCCGGCCAGGCCTGCC
 ACAGAGAAGTGGCTGCCATCCACCGCTGGGCATTGGCACCACCGACAAGATCTTTCTGGAATTCGAGG
 AGCCCTTCTGGGCGCCTGAGTGCAACAGCCTACAGTTTGTGTGGGAGGACGAAGCAGAGCCACACCT
 CACCTACCCACCTGAGCTCTGGTACCGCAAGATCTGCGGCTTGTGATGTCCTCTACCCGCCTGAGCGCTAC
 GGCCATGTGCTGAGCGGCTGGATCTGCGGGGAGGAGGCCCTCGTCATGGAGAAGTGTGATGACGAGGCGAG
 TGGCCGAGATCTGCACGGAGATGCTGCGTCAGTTCACAGGGAACCCCAACATTCCAAAACCTCGGCGAAT
 CTTGCGCTCGGCCTGGGGCAGCAACCTTACTTCCGCGGCTCCTATTACACGAGGTTGGGCTCCAGC
 GGGGCGGATGTGGAGAAGCTGGCCAAGCCCTGCCGTACACAGAGAGCTCAAAGACAGCGCCATGCAGG
 TGCTGTTTTCCGGTGGAGCCACCACCGCAAGTACTATTCCACCACCCACGGTCTCTGCTGTCCGGCCA
 GCGTGAGGCTGCCCGCTCATTGAGATGTACCGAGACCTTCCAGCAGGGGACC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG218947 representing NM_175839
 Red=Cloning site Green=Tags(s)

MQSCESSGDSADDPLSRGLRRRQPRVVVIGAGLAGLAAAKALLEQFTDVTVLEASSHIGGRVQSVKLG
 HATFELGATWIHGSHGNPIYHLAEANGLLEETDGERSVGRISLYSKNGVACYLTNHGRRIPKDVVEEFS
 DLYNEVYNLTQEFFRHKPVNAESQNSVGVFTREEVRNRIRNDPDDPEATKRLKLAMIQQYLKVESCESS
 SHSMDEVSLSAFGEWTEIPGAHHIIPSGFMRVVELLAEGIPAHVIQLGKPVRCIHWDQASARPRGPEIEP
 RGEDHNHDTGEGGQGGEEPRGGRWDEDEQWSVVVECEDCELIPADHVIVTVSLGVLKRQYTSFFRPLP
 TEKVAAIHRLIGITTDKIFLEFEFPFWGPECNSLQFVWEDEAESHTLTYPPELWYRKICGFDVLYPPER
 GHVLSGWICGEEALVMEKCDDEAVAEICTEMLRQFTGNPNIPKPRRILRSWGSNPYFRGSYSYTVQVSS
 GADVEKLAKPLPYTESSKTAPMQVLFSGEATHRKYYSTTHGALLSGQREARLIEMYRDLFQQT

TRTRPLE – GFP Tag – V

Restriction Sites:

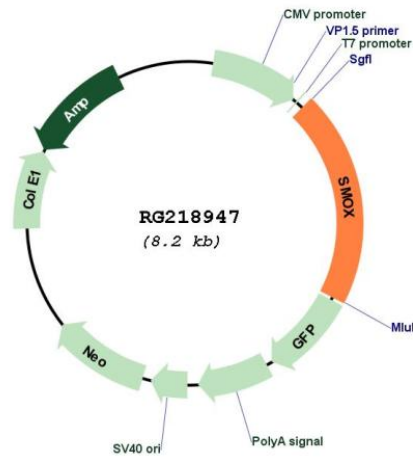
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN:	NM_175839
ORF Size:	1665 bp
OTI Disclaimer:	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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</p>
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:	<ol style="list-style-type: none"> 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_175839.3
RefSeq Size:	2203 bp
RefSeq ORF:	1668 bp
Locus ID:	54498
UniProt ID:	Q9NWM0
Cytogenetics:	20p13
Protein Families:	Druggable Genome

Gene Summary:

Polyamines are ubiquitous polycationic alkylamines which include spermine, spermidine, putrescine, and agmatine. These molecules participate in a broad range of cellular functions which include cell cycle modulation, scavenging reactive oxygen species, and the control of gene expression. These molecules also play important roles in neurotransmission through their regulation of cell-surface receptor activity, involvement in intracellular signalling pathways, and their putative roles as neurotransmitters. This gene encodes an FAD-containing enzyme that catalyzes the oxidation of spermine to spermadine and secondarily produces hydrogen peroxide. Multiple transcript variants encoding different isoenzymes have been identified for this gene, some of which have failed to demonstrate significant oxidase activity on natural polyamine substrates. The characterized isoenzymes have distinctive biochemical characteristics and substrate specificities, suggesting the existence of additional levels of complexity in polyamine catabolism. [provided by RefSeq, Jul 2012]