

Product datasheet for **RG234497**

SMOX (NM_001270691) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SMOX (NM_001270691) 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:

>RG234497 representing NM_001270691
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGCAAAGTTGTGAATCCAGTGGTGACAGTGGGATGACCTCTCAGTCGCGCCTACGGAGAAGGGGAC
 AGCCTCGTGTGGTGGTATCGGGCGCGCTTGGCTGGCCTGGCTGCAGCCAAAGCACTTCTTGAGCAGGG
 TTTCACGGATGTCACTGTGCTTGAAGCTTCCAGCCACATCGGAGGCCGTGTGCAGAGTGTGAAACTTGGA
 CACGCCACCTTTGAGCTGGGAGCCACCTGGATCCATGGCTCCCATGGAAACCCTATCTATCATCTAGCAG
 AAGCCAACGGCCTCCTGGAAGAGACAACCGATGGGGAACGCAGCGTGGGCCGCATCAGCCTCTATCCAA
 GAATGGCGTGGCCTGCTACCTTACCAACCACGGCCGAGGATCCCCAAGGACGTGGTTGAGGAATTCAGC
 GATTTATACAACGAGGTCTAATACTTGACCCAGGAGTTCTCCGGCAGGATAAACCAAGTCAATGCTGAAA
 GTCAAAATAGCGTGGGGGTGTTACCCGAGAGGAGGTGCGTAACCGCATCAGGAATGACCCTGACGACCC
 AGAGGCTACCAAGCGCCTGAAGCTCGCCATGATCCAGCAGTACCTGAAGGTGGAGAGCTGTGAGAGCAGC
 TCACACAGCATGGACGAGGTGTCCTGAGCGCCTTCGGGGAGTGGACCGAGATCCCCGGCGCTCACCACA
 TCATCCCCTCGGGCTTCATGCGGGTGTGGAGCTGCTGGCGGAGGGCATCCCTGCCACGTCATCCAGCT
 AGGGAAACCTGTCCGCTGCATTCAGTGGGACCAGGCCTCAGCCCGCCCCAGAGGCCCTGAGATTGAGCCC
 CGGGGTGAGGGCGACCACAATCACGACACTGGGGAGGGTGGCCAGGGTGGAGAGGAGCCCCGGGGGGCA
 GGTGGGATGAGGATGAGCAGTGGTGGTGGTGGAGTGCAGGACTGTGAGCTGATCCCGCGGACCA
 TGTGATTGTGACCGTGTGCTAGGTGTGCTAAAGAGGCAGTACACCAGTTTCTCCGGCCAGGCCTGCC
 ACAGAGAAGGTGGCTGCCATCCACCGCTGGGCATTGGCACCACCGACAAGATCTTTCTGGAATTCGAGG
 AGCCCTTCTGGGCCCCTGAGTGCAACAGCCTACAGTTTGTGTGGGAGGACGAAGCAGAGCCACACCCT
 CACCTACCCACCTGAGCTCTGGTACCGCAAGATCTGCGGCTTTGATGTCCTCTACCCGCCTGAGCGCTAC
 GGCCATGTGCTGAGCGGCTGGATCTGCGGGGAGGAGGCCCTCGTCATGGAGAAGTGTGATGACGAGGCGAG
 TGGCCGAGATCTGCACGGAGATGCTGCGTCAGTTCACAGGGAACCCCAACATTCCAAAACCTCGGCGAAT
 CTTGCGCTCGGCCTGGGGCAGCAACCCTTACTCCGCGGCTCCTATTACACGAGGTTGGGCTCCAGC
 GGGGCGGATGTGGAGAAGCTGGCCAAGCCCTGCCGTACACAGAGAGCTCAAAGACAGCGCATGGAAGCT
 CCACAAAGCAGCAGCCTGGTACCTTTTCTTCCAAGTGCCAGAACAGCCCTGGATGCTAACAGGGG
 CGCCGTAAGCCCATGCAGGTGCTGTTTTCCGGTGAGGCCACCCACCGCAAGTACTATTCCACCACCCAC
 GGTGCTCTGCTGTCGGCCAGCGTGAGGCTGCCCGCCTATTGAGATGTACCGAGACCTCTCCAGCAGG
 GGACC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG234497 representing NM_001270691
 Red=Cloning site Green=Tags(s)

MQSCESSGDSADDPLSRGLRRRQPRVVVIGAGLAGLAAAKALLEQGFTDVTVLEASSHIGGRVQSVKLG
 HATFELGATWIHGSHGNPIYHLAEANGLLEETDGERVGRISL YSKNGVACYLTNHGRRIPKDVVEEFS
 DLYNEVYNLTQEFFRHDKPVNAESQNSVGVFTREEVRNRIRNDPDDPEATKRLKLAMIQQYLKVESCESS
 SHSMDEVSLSAFGEWTEIPGAHHIIPSGFMRVVELLAEGIPAHVIQLGKPVRCIHWDQASARPRGPEIEP
 RGEDHNDTGEQQGGEEPRGGRWDEDEQWSVVVECEDCELIPADHVIIVTVSLGVLKRQYTSFFRPLP
 TEKVAAIHRLLGIGTTDKIFLEFEFPFWGPECNSLQFVWEDEAESHTLTYPPELWYRKICGFDVLYPPER
 GHVLSGWICGEEALVMEKCDDEAVAEICTEMLRQFTGNPNIPKPRRILRSAWGSPNYFRGSYSYTVQVSS
 GADVEKLA KPLPYTESSKTAHGSSTKQQPGLFSSKCPQLDANRGAVKPMQVLFSGEATHRKYYSTTH
 GALLSGQREARLIEMYRDLFQQGT

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_001270691

ORF Size: 1755 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_001270691.1](#), [NP_001257620.1](#)

RefSeq Size: 2339 bp

RefSeq ORF: 1758 bp

Locus ID: 54498

UniProt ID: [Q9NWM0](#)

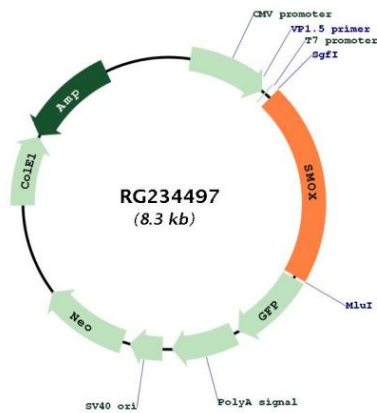
Cytogenetics: 20p13

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]

Product images:


Circular map for RG234497