

## Product datasheet for **RG223361**

### **SMOX (NM\_175842) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	SMOX (NM_175842) 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:**

>RG223361 representing NM\_175842  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGCAAAGTTGTGAATCCAGTGGTGACAGTGGGATGACCTCTCAGTCGCGCCTACGGAGAAGGGGAC  
 AGCCTCGTGTGGTGGTATCGGGCCGGCTTGGCTGGCCTGGCTGCAGCCAAAGCACTTCTTGAGCAGGG  
 TTTCACGGATGTCACTGTGCTTGAAGCTTCCAGCCACATCGGAGGCCGTGTGCAGAGTGTGAAACTTGGA  
 CACGCCACCTTTGAGCTGGGAGCCACCTGGATCCATGGCTCCCATGGAAACCCTATCTATCATCTAGCAG  
 AAGCCAACGGCCTCCTGGAAGAGACAACCGATGGGGAACGCAGCGTGGGCCGCATCAGCCTCTATTTCAA  
 GAATGGCGTGGCCTGCTACCTTACCAACCACGGCCGAGGATCCCCAAGGACGTGGTTGAGGAATTCAGC  
 GATTTATACAACGAGGTCTAATACTTGACCCAGGAGTTCTTCCGGCAGATAAACCAAGTCAATGCTGAAA  
 GTCAAAATAGCGTGGGGTGTTCACCCGAGAGGAGGTGCGTAACCGCATCAGGAATGACCCTGACGACCC  
 AGAGGCTACCAAGCGCCTGAAGCTCGCCATGATCCAGCAGTACCTGAAGGTGGAGAGCTGTGAGAGCAGC  
 TCACACAGCATGGACGAGGTGTCCCTGAGCGCCTTCGGGGAGTGGACCGAGATCCCCGGCGCTCACACA  
 TCATCCCCTCGGGCTTCATGCGGGTGTGGAGCTGCTGGCGGAGGGCATCCCTGCCACGTCATCCAGCT  
 AGGGAAACCTGTCCGCTGCATTCAGTGGGACCAGGCCTCAGCCCGCCCCAGAGGCCCTGAGATTGAGCCC  
 CGGGGTGTGCTAAAGAGGCAGTACACCAGTTTCTTCCGGCCAGGCCTGCCACAGAGAAGGTGGCTGCCA  
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 GTGCAACAGCCTACAGTTTGTGTGGGAGGACGAAGCAGAGAGCCACACCTCACCTACCCACCTGAGCTC  
 TGGTACCGCAAGATCTGCGGCTTGTATGTCCTTACCCGCCTGAGCGCTACGGCCATGTGCTGAGCGGT  
 GGATCTGCGGGGAGGAGGCCCTCGTCATGGAGAAGTGTGATGACGAGGCAGTGGCCGAGATCTGACGGA  
 GATGCTGCGTCAGTTTACAGGGAACCCCAACATTCCAAAACCTCGGCGAATCTTGCCTCGGCCTGGGGC  
 AGCAACCTTACTTCCGGGCTCCTATTCATACACGCAGGTGGGCTCCAGCGGGGCGGATGTGGAGAAGC  
 TGGCCAAGCCCCTGCCGTACACAGAGAGCTCAAAGACAGCGCATGGAAGCTCCACAAAGCAGCAGCCTGG  
 TCACCTTTTCTTCCAAGTGCCAGAACAGCCCTGGATGCTAACAGGGGCGCCGTAAGCCCATGCAG  
 GTGCTGTTTTCCGGTGAAGCCACCCACCGCAAGTACTATTCCACCACCCAGGTGCTGCTGTCCGGCC  
 AGCGTGAGGCTGCCCGCCTCATTGAGATGTACCGAGACCTTCCAGCAGGGGACC

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>RG223361 representing NM\_175842  
 Red=Cloning site Green=Tags(s)

MQSCESSGDSADDPLSRGLRRRQPRVVVIGAGLAGLAAAKALLEQFTDVTVLEASSHIGGRVQSVKLG  
 HATFELGATWIHGSHGNPIYHLAEANGLLEETTDGERSVGRISLYSKNGVACYLTNHGRRIPKDVVEEFS  
 DLYNEVYNLTQEFFRHDKPVNAESQNSVGFTRREEVRNRI RNDPDDPEATKRLKLAMIQQYLKVESCESS  
 SHSMDEVSLSAFGEWTEIPGAHHIIPSGFMRVVELLAEGIPAHVIQLGKPVRCIHWDQASARPRGPEIEP  
 RGVLRQYTSFFRPGLPTEKVAAIHRIGITTDKIFLEFEFPFWGPECNSLQFVWEDEAESHTLTYPPEL  
 WYRKICGFDVLYPPERYGHVLSGWICGEEALVMEKCDDEAVAEICTEMLRQFTGNPNIPKPRRILRSAWG  
 SNPYFRGSYSYTVQVSSGADVEKLAKPLPYTESSKTAHGSSTKQQPGLFSSKCPQLDANRGAVKPMQ  
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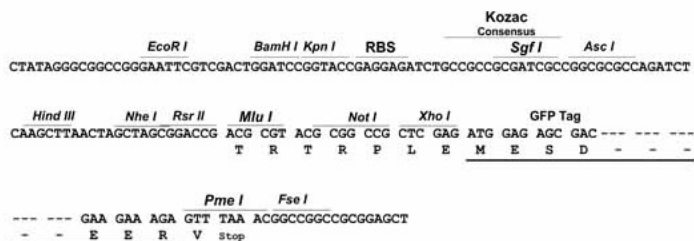
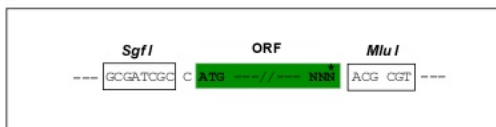
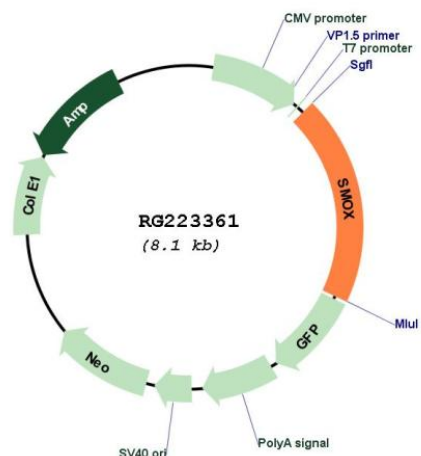
**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:


**Plasmid Map:**


<b>ACCN:</b>	NM_175842
<b>ORF Size:</b>	1596 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_175842.3</a>
<b>RefSeq Size:</b>	2134 bp
<b>RefSeq ORF:</b>	1599 bp
<b>Locus ID:</b>	54498
<b>UniProt ID:</b>	<a href="#">Q9NWM0</a>
<b>Cytogenetics:</b>	20p13
<b>Protein Families:</b>	Druggable Genome
<b>Gene Summary:</b>	<p>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 spermidine 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]</p>