

## Product datasheet for **RG214652**

### SMOX (NM\_175841) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** SMOX (NM\_175841) 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)  
**ORF Nucleotide Sequence:** >RG214652 representing NM\_175841  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCAAAGTTGTGAATCCAGTGGTGACAGTGCGGATGACCCTCTCAGTCGCGGCCTACGGAGAAGGGGAC  
AGCCTCGTGTGGTGGTATCGGCGCCGGCTTGGCTGGCTGGCTGCAGCCAAAGCACTTCTTGAGCAGGG  
TTTCACGGATGCACTGTGCTTGAGGCTTCCAGCCACATCGGAGGCCGTGTGCAGAGTGTGAACTTGA  
CACGCCACCTTTGAGCTGGGAGCCACCTGGATCCATGGCTCCCATGGGAACCTATCTATCATCTAGCAG  
AAGCCAACGGCCTCCTGGAAGAGACAACCGATGGGGAACGCAGCGTGGGCCGCATCAGCCTCTATCCAA  
GAATGGCGTGGCCTGCTACCTTACCAACCACGGCCGAGGATCCCAAGGACGTGTTGAGGAATTCAGC  
GATTTATAACAACGAGCCCATGCAGGTGCTGTTTTCCGGTGAGGCCACCCACCGCAAGTACTATCCACCA  
CCCACGGTGTCTGTGCTCGGCCAGCGTGAGGCTGCCCGCCTCATTGAGATGTACCGAGACCTCTTCCA  
GCAGGGGACC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG214652 representing NM\_175841  
Red=Cloning site Green=Tags(s)

MQSCCESSGDSADDPLSRGLRRRQPRVVVIGAGLAGLAAAKALLEQGFTDVTVLEASSHIGGRVQSVKLG  
HATFELGATWIHGSHGNPIYHLAEANGLLEETTDGERSVGRISL YSKNGVACYL TNHGRRIPKDVVEEFS  
DLYNEPMQVLFSGEATHRKYYSTTHGALLSGQREARLIEMYRDLFQQGT

**TRTRPLE** - GFP Tag - V

**Restriction Sites:** Sgfl-MluI

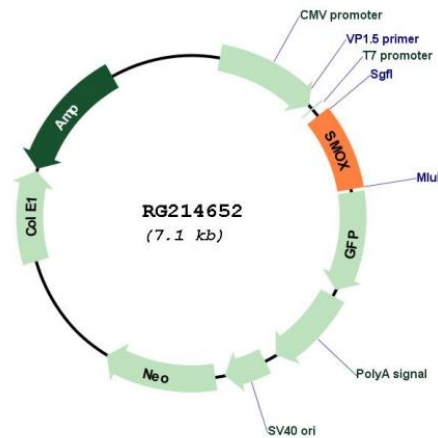


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Cloning Scheme:



Plasmid Map:



ACCN: NM\_175841

ORF Size: 570 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\\_175841.3](#)

**RefSeq Size:** 1154 bp

**RefSeq ORF:** 573 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]