

Product datasheet for **RG207605**

SFTPb (NM_000542) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: SFTPb (NM_000542) Human Tagged ORF Clone
Tag: TurboGFP
Symbol: SFTPb
Synonyms: PSP-B; SFTB3; SFTP3; SMDP1; SP-B
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >RG207605 representing NM_000542
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGCTGAGTCACACCTGCTGCAGTGGCTGCTGCTGCTGCTGCCACGCTCTGTGGCCAGGCACTGCTG
 CCTGGACCACCTCATCCTTGGCCTGTGCCAGGGCCCTGAGTTCTGGTCCAAAGCCTGGAGCAAGCATT
 GCAGTGCAGAGCCCTAGGGCATTGCCTACAGGAAGTCTGGGGACATGTGGGAGCCGATGACCTATGCCAA
 GAGTGTGAGGACATCGTCCACATCCTTAAACAAGATGGCCAAGGAGGCCATTTCCAGGACACGATGAGGA
 AGTTCCCTGGAGCAGGAGTCAACGCTCCTCCCTTGAAGCTGCTCATGCCCCAGTGAACCAAGTGTGTA
 CGACTACTTCCCCTGGTCATCGACTACTTCCAGAACCAGACTGACTCAAACGGCATCTGTATGCACCTG
 GGCTGTGCAAAATCCCGGCAGCCAGAGCCAGAGCAGGAGCCAGGGATGTCAGACCCCTGCCAAACCTC
 TGCGGGACCCTCTGCCAGACCCTCTGCTGGACAAGCTCGTCTCCTGTGCTGCCCGGGGCCCTCCAGGC
 GAGGCCTGGGCCCTCACACACAGGATCTCTCCGAGCAGCAATCCCATTCTCCTCCTATTGCTGGCTC
 TGCAGGGCTCTGATCAAGCGGATCCAAGCCATGATCCCAAGGGTGCCTAGCTGTGGCAGTGGCCAGG
 TGTGCCCGTGGTACCTCTGGTGGCGGGCGCATCTGCCAGTGCCTGGCTGAGCGCTACTCCGTCATCCT
 GCTCGACACGCTGCTGGGCCGATGCTGCCACAGCTGGTCTGCCGCTCGTCTCCGGTGTCTCCATGGAT
 GACAGCGCTGGCCCAAGGTCGCCGACAGGAGAATGGCTGCCGAGACTGAGTGCCACCTCTGCATGT
 CCGTGACCACCCAGGCCGGAACAGCAGCGAGCAGGCCATACCACAGGCAATGCTCCAGGCCTGTGTGG
 CTCTGGCTGGACAGGAAAAGTCAAGCAATTTGTGGAGCAGCACGCCCCAGCTGCTGACCCTGGTG
 CCCAGGGGCTGGGATGCCACACCACTGCCAGGCCCTCGGGGTGTGGGACCATGTCCAGCCCTCTCC
 AGTGTATCCACAGCCCCGACCTT

ACGGTACGGGCCGCTCGAG - GFP Tag - GTTTAA



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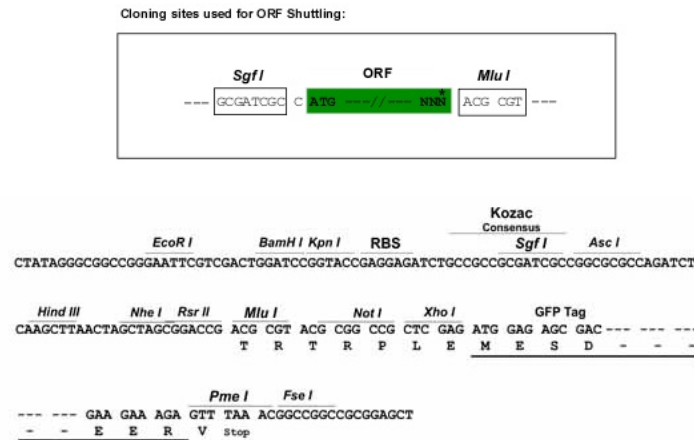
Protein Sequence: >RG207605 representing NM_000542
 Red=Cloning site Green=Tags(s)

MAESHLLQWLLLLPTLCGPGTAAWTTSSLACAQGFQWQSLQALQCRALGHCLQEIVWGHVGGADLCCQ
 ECEDIVHILNKMAKEAIFQDTRKFLQECNVLPKLLMPQCNQVLDYFPLVIDYFQNTDSNGICMHL
 GLCKSRQPEPEQEPGMSDPLPKPLRDLPLDPLDKLVLPVLPALQARPGPHTQDLSEQQFPIPLPYCWL
 CRALIKRIQAMIPKALAVAVAQVCRVPLVAGGICQCLAERYSVILLDTLLGRMLPQLVCRLVLRCSMD
 DSAGPRSPTGEWLPDSECHLCMSVTTQAGNSSEQAIPQAMLQACVGSWLDREKCKQFVEQHTPQLLTLV
 PRGWAHTTCQALGVCVTMSPLQCIHSPDL

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000542

ORF Size: 1143 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_000542.5](#)

RefSeq Size: 2026 bp

RefSeq ORF: 1146 bp

Locus ID: 6439

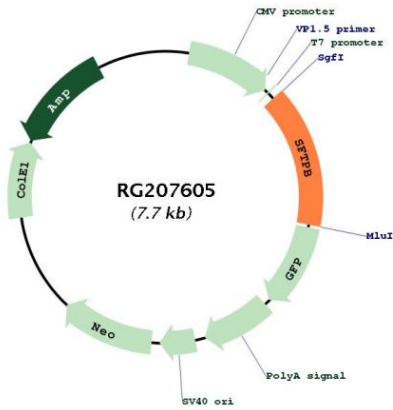
UniProt ID: [P07988](#)

Cytogenetics: 2p11.2

Protein Families: Druggable Genome, Secreted Protein

Gene Summary: This gene encodes the pulmonary-associated surfactant protein B (SPB), an amphipathic surfactant protein essential for lung function and homeostasis after birth. Pulmonary surfactant is a surface-active lipoprotein complex composed of 90% lipids and 10% proteins which include plasma proteins and apolipoproteins SPA, SPB, SPC and SPD. The surfactant is secreted by the alveolar cells of the lung and maintains the stability of pulmonary tissue by reducing the surface tension of fluids that coat the lung. The SPB enhances the rate of spreading and increases the stability of surfactant monolayers in vitro. Multiple mutations in this gene have been identified, which cause pulmonary surfactant metabolism dysfunction type 1, also called pulmonary alveolar proteinosis due to surfactant protein B deficiency, and are associated with fatal respiratory distress in the neonatal period. Alternatively spliced transcript variants encoding the same protein have been identified.[provided by RefSeq, Feb 2010]

Product images:



Circular map for RG207605