

## Product datasheet for **SC300040**

### PTCH1 (NM\_000264) Human Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** PTCH1 (NM\_000264) Human Untagged Clone  
**Tag:** Tag Free  
**Symbol:** PTCH1  
**Synonyms:** BCNS; NBCCS; PTC; PTC1; PTCH  
**Mammalian Cell Selection:** None  
**Vector:** [pCMV6-XL5](#)  
**E. coli Selection:** Ampicillin (100 ug/mL)

**Fully Sequenced ORF:** >OriGene sequence for NM\_000264 edited  
 CAGCGGCTGGTCTGTCAACCGGAGCCCGAGCCCGAGCAGCCTGCGGCCAGCAGCGTCTCT  
 GCAAGCCGAGCGCCAGGCGCGCCAGGAGCCCGCAGCAGCGCCAGCGCGCCGGCCG  
 CCCGGGAAGCCTCCGTCCCCGCGCGGGCGGGCGGGCGGCAACATGGCCTCGGCTGG  
 TAACGCCCGCAGCCCCAGGACCGCGGGCGGGCGGCGGCGGCTGTATCGGTGCCCGGG  
 ACGGCCGCTGGAGGCGGGAGGCGCAGACGGGGGGGCTGCGCCGTGCTGCCCGCC  
 GGACCGGACTATCTGCACCGGCCAGCTACTGCGACGCCCTTCGCTCTGGAGCAGAT  
 TTCCAAGGGAAGGCTACTGGCCGAAAGCGCGCTGTGGCTGAGAGCGAAGTTTCAGAG  
 ACTCTTATTTAACTGGTTGTACATTCAAAAAACTGCGGCAAGTTCTTGGTTGTGGG  
 CCTCTCATATTTGGGCTTCGCGGTGGGATTAAGCAGCGAACCTCGAGACCAACGT  
 GGAGGAGCTGTGGTGGAAAGTTGGAGGACGAGTAAGTCGTGAATTAATTATACTGCCA  
 GAAGATTGGAGAAGAGGCTATGTTTAATCCTCAACTCATGATACAGACCCCTAAAGAAGA  
 AGGTGCTAATGTCTGACCACAGAAGCGCTCTACAACACTGGACTCGGCACTCCAGGC  
 CAGCCGTGTCCATGTATACATGTACAACAGGCAGTGGAAATTGGAACATTTGTGTACAA  
 ATCAGGAGAGCTTATCACAGAAACAGGTTACATGGATCAGATAATAGAATATCTTTACCC  
 TTGTTTGATTATTACACCTTTGGACTGCTTCTGGGAAGGGGCGAAATTACAGTCTGGGAC  
 AGCATACCTCCTAGGTAACCTCCTTTGCGGTGGACAACTTCGACCCTTTGGAATTCCT  
 GGAAGAGTTAAAGAAAATAAACTATCAAGTGGACAGCTGGGAGGAAATGCTGAATAAGGC  
 TGAGTTGGTTCATGGTTACATGGACCGCCCTGCCTCAATCCGGCCGATCCAGACTGCC  
 CGCCACAGCCCCCAAAAAATTAACCAAACTCCTTGATATGGCCCTTGTTTGAATGG  
 TGGATGTCATGGCTTATCCAGAAAAGTATATGCACTGGCAGGAGGAGTTGATTGTGGGTGG  
 CACAGTCAAGAACAGCACTGGAAAACCTCGTCAGCGCCATGCCCTGCAGACCATGTTCCA  
 GTTAATGACTCCCAAGCAAATGTACGAGCACTTCAAGGGGTACGAGTATGTCTCACACAT  
 CAACTGGAACGAGGACAAAGCGGCAGCCATCCTGGAGGCCTGGCAGAGGACATATGTGGA  
 GGTGGTTCATCAGAGTGTGCACAGAATCCACTCAAAGGTGCTTTCCTCACCACCAC  
 AACCTGGACGACATCCTGAAATCCTTCTGACGTGAGTGTATCCGCGTGGCCAGCGG  
 CTACTTACTCATGCTCGCCTATGCCTGTCTAACCATGCTGCGCTGGGACTGCTCCAAGTC



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CCAGGGTGCCGTGGGGCTGGCTGGCGTCCTGCTGGTTGCACTGTCACTGGCTGCAGGACT  
 GGGCCTGTGCTCATTGATCGGAATTTCCCTTAAACGCTGCAACAACCTCAGGTTTTGCCATT  
 TCTCGCTCTTGGTGTGGTGTGGATGATGTTTTCTTCTGGCCCACGCCTTCAGTGAAAC  
 AGGACAGAATAAAAGAATCCCTTTTGGAGACAGGACCGGGGAGTGCCTGAAGCGCACAGG  
 AGCCAGCGTGGCCCTCACGTCCATCAGCAATGTCACAGCCTTCTCATGGCCGCGTTAAT  
 CCCAATCCCCTCTGCGGGCGTTCTCCCTCCAGCAGCGGTAGTAGTGGTGTCAATTT  
 TGCCATGGTTCTGCTCATTCTTCTGCAATTCTCAGCATGGATTTATATCGACGCGAGGA  
 CAGGAGACTGGATATTTTCTGCTGTTTTACAAGCCCTGCGTCAGCAGAGTGATTCAGGT  
 TGAACCTCAGGCCTACACCGACACACACACAATACCCGCTACAGCCCCCACCTCCCTA  
 CAGCAGCCACAGCTTTGCCATGAAACGCAGATTACCATGCAGTCCACTGTCCAGCTCCG  
 CACGGAGTACGACCCCCACAGCAGTGTACTACACCACCGCTGAGCCGCGCTCCGAGAT  
 CTCTGTGACGCCGTACCGTGACACAGGACACCCTCAGCTGCCAGAGCCCAGAGAGCAC  
 CAGCTCCACAAGGGACCTGCTCTCCAGTTCTCCGACTCCAGCCTCCACTGCCTCGAGCC  
 CCCCTGTACGAAGTGGACACTCTCATCTTTTGTGAGAAGCACTATGCTCCTTTCTCTT  
 GAAACCAAAAGCCAAGGTAGTGGTGATCTTCTTTTTCTGGGCTTGTGGGGTCAAGCT  
 TTATGGCACACCAGTGGAGAGACGGGCTGGACCTTACGGACATTGTACCTCGGGAAAC  
 CAGAGAATATGACTTTATTGCTGCACAATCAAATACTTTTCTTTCTACAACATGTATAT  
 AGTCAACCCAGAAAGCAGACTACCCGAATATCCAGCACTTACTTTACGACCTACACAGGAG  
 TTTTCAGTAACGTGAAGTATGTCATGTTGGAAGAAAACAACAGCTTCCCAAAATGTGGCT  
 GCACTACTTCAGAGACTGGCTTCAGGGACTTCAGGATGCATTTGACAGTACTGGGAAAC  
 CCGGAAAATCATGCCAAACAATTACAAGAATGGATCAGACGATGGAGTCTTGCCTACAA  
 ACTCCTGGTGCAAACCGCAGCCCGGATAAGCCCATCGACATCAGCCAGTTGACTAAACA  
 GCGTCTGGTGGATGCAGATGGCATCATTAAATCCAGCGCTTTCTACATCTACTGACGGC  
 TTGGGTACAGCAACGACCCCGTTCGCGTATGCTGCCTCCAGGCCAACATCCGGCCACACCG  
 ACCAGAATGGGTCCACGACAAAGCCGACTACATGCCTGAAAACAAGGCTGAGAATCCCGGC  
 AGCAGAGCCCATCGAGTATGCCAGTTCCTTTTCTACCTCAACGGCTTGGCGGACACCTC  
 AGACTTTGTGGAGGCAATTGAAAAAGTAAGGACCATCTGCAGCAACTATACGAGCCTGGG  
 GCTGTCCAGTTACCCCAACGGCTACCCCTTCTCTTCTGGGAGCAGTACATCGGCCTCCG  
 CCACTGGCTGCTGCTGTTTCATCAGCGTGGTGTGGCTGCACATTCTCGTGTGCGCTGT  
 CTTCTTCTGAACCCCTGGACGGCCGGGATCATTGTGATGGTCTGGCGTGATGACGGT  
 CGAGCTGTTCCGATGATGGGCCTCATCGGAATCAAGCTCAGTCCCGTGCCCGTGGTTCAT  
 CCTGATCGCTTCTGTTGGCATAGGAGTGGAGTTACCCGTTACGTTGCTTTGGCCTTTCT  
 GACGGCCATCGGCGACAAGAACCAGGGCTGTGCTTGCCTGGAGCACATGTTTGCACC  
 CGTCTGGATGGCGCCGTGTCCACTCTGCTGGGAGTGTGATGCTGGCGGGATCTGAGTT  
 CGACTTCAATTGTGAGGATTTCTTTTGTGCTGCTGGCGATCCTCACCATCTCGGCGTTCT  
 CAATGGGCTGGTTTTGCTTCCCGTGTCTTTGTCTTTCTTTGGACCATATCCTGAGGTGTC  
 TCCAGCCAACGGCTTGAACCGCTGCCACACCCTCCCTGAGCCACCCCCAGCGTGGT  
 CCGCTTCGCCATGCCGCCGGCCACAGCACAGCGGGTCTGATTCTCCGACTCGGAGTA  
 TAGTTCCAGACGACAGTGTGAGCCCTCAGCAGGAGCTTCGGCACTACGAGGCCAGCA  
 GGGCGCGGGAGGCCCTGCCACCAAGTATCGTGGAAAGCCACAGAAAACCCCGTCTTCGC  
 CCACTCCACTGTGGTCCATCCCGAATCCAGGCATCACCCACCCTCGAACCAGAGACAGCA  
 GCCCCACCTGGACTCAGGGTCCCTGCCTCCCGACGGCAAGGCCAGCAGCCCCGAGGGA  
 CCCCCCAGAGAAGGCTTGTGGCCACCCCTCTACAGACCGCGCAGAGACGCTTTTGAAT  
 TTCTACTGAAGGGCATTCTGGCCCTAGCAATAGGGCCCGCTGGGGCCCTCGCGGGCCCCG  
 TTCTCACAAACCTCGGAACCCAGCGTCCACTGCCATGGGCAGTCCGTGCCCGGCTACTG  
 CCAGCCCATCACCCTGTGACGGCTTCTGCCTCCGTGACTGTCCCGTGCACCCGCGCC  
 TGTCCCTGGGCTGGGCGGAACCCCGAGGGGACTCTGCCAGGCTACCCTGAGACTGA  
 CCACGGCCTGTTTGGAGACCCACAGTGCCTTTCCACGTCGGGTGTGAGAGGAGGGATTC  
 GAAGGTGGAAGTCATTGAGCTGCAGGACGTGGAATGCGAGGAGAGGCCCGGGGAAGCAG  
 CTCCAACCTGAGGGTGATTAATACTGAAGCAAAGAGGCCAAAGATTGGAAAACCCCCACC  
 CCCACCTCTTCCAGAAGTCTTGAAGAGAAGTGGTTGGAGTTATGGAAAAGATGCCCTG  
 TGCCAGGACAGCAGTTCATTGTTACTGTAACCGATTGATTATTTTGTAAATATTTCTA

TAAATATTTAAGAGATGTACACATGTGTAATATAGGAAGGAAGGATGTAAGTGGTATGA  
 TCTGGGGCTTCTCCACTCCTGCCCCAGAGTGTGGAGGCCACAGTGGGGCCTCTCCGTATT  
 TGTGCATTGGGCTCCGTGCCACAACCAAGCTTGTGCACTCTAGATTGCGGCCGCGGTAT  
 AGCTGTTTCTGAACAGATCCCCGGTGGCAG

**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_000264 unedited  
 CGTGACATTTGTATACGATCATATAGGCGGCCGCGNATTCAAATCTGGTACCGATATCTG  
 CAGAAATTCGCCCTTCAGCGGCTGGTCTGTCAACCGGAGCCCGAGCCCGAGCAGCCTGCGG  
 CCAGCAGCGTCTCGAAAGCCGAGCGCCAGGCGGCCAGGAGCCCGCAGCAGCGGCAGC  
 AGCGCGCCGGGCCCGCCGGGAAGCCTCCGTCCCGCGGCGGCGGCGGCGGCGGCAAC  
 ATGGCCTCGGCTGGTAACGCCCGGAGCCCGAGGACCGCGGCGGCGGCGGCGGCGGCTGT  
 ATCGGTGCCCGGAGCGGCCGCTGGAGCGGGAGGCGCAGACGGACGGGGGGCTGCGC  
 CGTGTGCGCGCCGGACCGGGACTATCTGCACCGGCCAGCTACTGCGACGCCGCTTC  
 GCTCTGGAGCAGATTTCCAAGGGGAAGGCTACTGGCCGAAAGCGCCGCTGTGGCTGAGA  
 GCGAAGTTTTAGAGACTCTTATTTAAACTGGGTTGTACATTCAAAAAAACTGCGCAAG  
 TTCTTGGTTGTGGCCTCCTCATATTTGGGCCTTCGCGGTGGGATTAAGCAGCGAAC  
 CTCGAGACCAACGTGGAGGAGCTGTGGTGGAAATGGAGGACGAGTAAGTCTGAATTA  
 AAATATACTTGCCAGAAGATTGGAAAAAGGCTATAGTTAAATCCTTCAACTCATGATAC  
 AAAACCCCTAAAAAAAAGGTGGCAAATGTCCTGGACAAAAAGCCGCTCCTTACAAAA  
 ACTGGGATTTGGCACTTCAAGGCCAGCCGTGGCCCTGGTTACCTGGTAACAAGCCGG

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_000264 unedited  
 ACTATTGGTAGAGGTCGCTCTGCAGGGCCAGNCGNAGCACTGGGGNAGGGTCACAGGCT  
 GCCACCCGGGATCTGTTCAAGAAACAGCTATGACCGCGGCCGCAATCTAGAGTCGACAAG  
 CTTGGTTGTGGCAGGAGCCCAATGCACAAATACGGAGAGGCCCACTGTGGCCTCCACA  
 CTCTGGGGCAGGAGTGGAGAAGCCCGATCATACCACTTTACATCCTTCCCTTCTATAT  
 TACACATGTGTACATCTTAAATATTTATAGAAATATTTAACAAAATAACAATCGGT  
 TACAGTAAACAATGAACTGCTGTCCTGGCACAGGGCATCTTTCCATAACTCCAACAGTT  
 CTCTTCAAGCAGTTCTGGAAGAGGTGGGGGTGGGGGTTTCCAATCTTTGGCCTCTTTG  
 CTTTCAGATTTTAAACACCCTCAGTTGGAGCTGCTTCCCGGGGCCCTCCTCGCATTTCA  
 CGTCTGCAGCTCAATGACTTCCACCTTCGCCGTGCCACTCTGCTGGGAGTGCTGATGC  
 TGGCGGGATCTGAATTCGACTTCATTGTGAGGATTTCTTTGCTGTGCTGGCGATCCTCA  
 CCATCCTCCGCTTCTCAATGAGGCTGGTTTTGCTTCCCGTGCTTTTGTCTTCTTTTG  
 ACCATATCCTGAGGTGCTCCCGCCCAAGGCTTGAACCGGCTGGCCACACCCCTCCCTTG  
 AACCCACCCCAAGCGTGGTCCCGGTTTAAACATGCCCGGCCCGGCCCAACGCCACAGC  
 GGGTTTTGATCTCCTCCGACTTCGGAATTTAGTTTCCCCAGGAAAAAAGTGTACAGGACC  
 TAATCAAAGGAACTTCTTGGAACTAG

**Restriction Sites:**

Please inquire

**ACCN:**

NM\_000264

**Insert Size:**

4800 bp

**OTI Disclaimer:** 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](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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:** The open reading frame of this TrueClone was fully sequenced and found to be a perfect match to the protein associated to this reference.

**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\\_000264.2](#), [NP\\_000255.1](#)

**RefSeq Size:** 6825 bp

**RefSeq ORF:** 4344 bp

**Locus ID:** 5727

**UniProt ID:** [Q13635](#)

**Cytogenetics:** 9q22.32

**Protein Families:** Druggable Genome, ES Cell Differentiation/IPS, Transmembrane

**Protein Pathways:** Basal cell carcinoma, Hedgehog signaling pathway, Pathways in cancer

**Gene Summary:**

This gene encodes a member of the patched family of proteins and a component of the hedgehog signaling pathway. Hedgehog signaling is important in embryonic development and tumorigenesis. The encoded protein is the receptor for the secreted hedgehog ligands, which include sonic hedgehog, indian hedgehog and desert hedgehog. Following binding by one of the hedgehog ligands, the encoded protein is trafficked away from the primary cilium, relieving inhibition of the G-protein-coupled receptor smoothed, which results in activation of downstream signaling. Mutations of this gene have been associated with basal cell nevus syndrome and holoprosencephaly. [provided by RefSeq, Aug 2017]

Transcript Variant: This variant (1b) encodes the longest isoform (L).