

Product datasheet for **SC316079**

PTCH1 (NM_001083607) Human Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: PTCH1 (NM_001083607) Human Untagged Clone
Tag: Tag Free
Symbol: PTCH1
Synonyms: BCNS; NBCCS; PTC; PTC1; PTCH
Vector: pCMV6 series
Fully Sequenced ORF: >NCBI ORF sequence for NM_001083607, the custom clone sequence may differ by one or more nucleotides

```
ATGTTTAACTCCTCAACTCATGATACAGACCCCTAAAGAAGAAGGTGCTAATGTCCTGACC
ACAGAAGCGCTCCTACAACACCTGGACTCGGCACTCCAGGCCAGCCGTGCCATGTATAC
ATGTACAACAGGCAGTGGAAATTGGAACATTTGTGTTACAAATCAGGAGAGCTTATCACA
GAAACAGGTTACATGGATCAGATAATAGAATATCTTTACCCTTGTGGATTATTACACCT
TTGGACTGCTTCTGGGAAGGGGCGAAATTACAGTCTGGGACAGCATACCTCCTAGGTAAA
CCTCCTTTGCGGTGGACAAACTTCGACCCTTTGGAATTCCTGGAAGAGTTAAAGAAAATA
AACTATCAAGTGGACAGCTGGGAGGAAATGCTGAATAAGGCTGAGGTTGGTCATGGTTAC
ATGGACCGCCCTGCCTCAATCCGGCCGATCCAGACTGCCCCGCCACAGCCCCAACAAA
AATTCAACCAAACCTCTTGATATGGCCCTGTTTTGAATGGTGGATGTCATGGCTTATCC
AGAAAGTATATGCACTGGCAGGAGGAGTTGATTGTGGGTGGCACAGTCAAGAACAGCACT
GGAAAACTCGTACAGCGCCATGCCTGCAGACCATGTTCCAGTTAATGACTCCCAAGCAA
ATGTACGAGCACTTCAAGGGGTACGAGTATGTCTCACACATCAACTGGAACGAGGACAAA
GCGGCAGCCATCCTGGAGGCCTGGCAGAGGACATATGTGGAGGTGGTTCATCAGAGTGTG
GCACAGAACTCCACTCAAAGGTGCTTTCTTACCACCACGACCCTGGACGACATCCTG
AAATCCTTCTCTGACGTGAGTGTATCCGCGTGGCCAGCGGCTACTTACTCATGCTCGCC
TATGCCTGTCTAACCATGCTGCGCTGGGACTGCTCCAAGTCCCAGGGTGCCGTGGGGCTG
GCTGGCGTCTGCTGGTTGCACTGTCAAGTGGCTGCAGGACTGGGCCTGTGCTCATTGATC
GGAATTTCTTTAACGCTGCAACAACCTCAGTTTTTCCATTTCTCGCTCTTGGTGTGGT
GTGGATGATGTTTTCTTCTGGCCACGCCTTCAGTGAACAGGACAGAATAAAAGAATC
CCTTTTGGAGACAGGACCGGGAGTGCCTGAAGCGCACAGGAGCCAGCGTGGCCCTCAGG
TCCATCAGCAATGTCACAGCCTTCTTCATGGCCGCTTAATCCCAATCCCGCTCTGCGG
GCGTTCTCCCTCCAGGCAGCGGTAGTAGTGGTGTCAATTTTCCATGGTTCTGCTCATT
TTTCTGCAATTCTCAGCATGGATTTATATCGACGCGAGGACAGGAGACTGGATATTTTC
TGCTGTTTTACAAGCCCCTGCGTCAGCAGAGTGATTGAGTTGAACCTCAGGCCTACACC
GACACACAGCAATAACCGCTACAGCCCCCACCTCCCTACAGCAGCCACAGCTTTGCC
CATGAAACGCAGATTACCATGCAGTCCACTGTCCAGCTCCGCACGGAGTACGACCCCCAC
ACGCACGTGTAACACACCGCTGAGCCGCGCTCCGAGATCTCTGTGCAGCCCGTCAACC
GTGACACAGGACACCCTCAGTGCAGAGCCCAGAGAGACCAGCTCCACAAGGGACCTG
CTCTCCAGTTCTCCGACTCCAGCTCCACTGCCTCGAGCCCCCTGTACGAAGTGGACA
```



[View online >](#)

```

CTCTCATCTTTTCTGCTGAGAAGCACTATGCTCCTTTCTCTTCAAACAAAAGCCAAGGTA
GTGGTGATCTTCTTTTCTGGGCTTGCTGGGGTTCAGCCTTTATGGCACCACCCGAGTG
AGAGACGGGCTGGACCTTACGGACATTGTACCTCGGAAACCAGAGAATATGACTTTATT
GCTGCACAATCAAATACTTTTCTTTCTACAACATGTATATAGTCACCCAGAAAGCAGAC
TACCCGAATATCCAGCACTTACTTTACGACCTACACAGGAGTTTCAGTAACGTGAAGTAT
GTCATGTTGGAAGAAAACAAACAGCTTCCAAAAATGTGGCTGCACTACTTCAGAGACTGG
CTTCAGGACTTCAGGATGCATTTGACAGTGACTGGGAAACCCGGAAAAATCATGCCAAAC
AATTACAAGAATGGATCAGACGATGGAGTCCTTGCCTACAAACTCCTGGTGCAAACCGGC
AGCCGCGATAAGCCCATCGACATCAGCCAGTTGACTAAACAGCGTCTGGTGGATGCAGAT
GGCATCATTAATCCCAGCGCTTTCTACATCTACCTGACGGCTTGGGTGAGCAACGACCCC
GTCGCGTATGCTGCCTCCAGGCCAACATCCGGCCACACCGACCAGAATGGGTCCACGAC
AAAGCCGACTACATGCCTGAAACAAGGCTGAGAATCCCGGCAGCAGAGCCCATCGAGTAT
GCCAGTTCCTTTCTACCTCAACGGCTTGCGGGACACCTCAGACTTTGTGGAGGCAATT
GAAAAAGTAAGGACCATCTGCAGCAACTATACGAGCCTGGGGCTGTCCAGTTACCCCAAC
GGCTACCCCTTCTCTTCTGGGAGCAGTACATCGGCCCTCCGCCACTGGCTGCTGTGTTT
ATCAGCGTGGTGTGGCCTGCACATTCCCTCGTGTGCGCTGTCTTCTTCTGAACCCCTGG
ACGGCCGGGATCATTGTGATGGTCTGGCGCTGATGACGGTTCGAGCTGTTCCGGCATGATG
GGCCTCATCGAATCAAGCTCAGTGCCGTGCCGTGGTTCATCCTGATCGCTTCTGTTGGC
ATAGGAGTGGAGTTCACCGTTACGTTGCTTTGGCCTTTCTGACGGCCATCGGGGACAAG
AACCGCAGGGCTGTGCTTGCCTGGAGCACATGTTTGACCCGCTCCTGGATGGCGCCGTG
TCCACTGCTGGGAGTGTGATGCTGGCGGATCTGAGTTCGACTTCATTGTGAGGTAT
TTCTTTGCTGTGCTGGGATCCTCACCATCCTCGGCTTCTCAATGGGCTGGTTTTGCTT
CCCGTGTCTTTGCTTTTCTTTGGACCATATCCTGAGGTGTCTCCAGCCAACGGCTTGAAC
CGCCTGCCACACCCCTCCCTGAGCCACCCCCAGCGTGGTCCGCTTCGCCATGCCGCC
GGCCACACGCACAGCGGCTGATTCTCCGACTCGGAGTATAGTTCCAGACGACAGTG
TCAGGCCCTCAGCGAGGAGCTTCGGCACTACGAGGCCAGCAGGGCGGGAGGCCCTGCC
CACCAAGTGATCGTGGAAGCCACAGAAAACCCCGTCTTCGCCACTCCACTGTGGTCCAT
CCCGAATCCAGGCATCACCCACCCTCGAACCCGAGACAGCAGCCCACTGGACTCAGGG
TCCCTGCCTCCCGGACGGCAAGGCCAGCAGCCCGCAGGGACCCCCAGAGAAGGCTTG
TGGCCACCCCTACAGACCGCGCAGAGACGCTTTTGAATTTCTACTGAAGGGCATTCT
GGCCCTAGCAATAGGGCCGCTGGGGCCCTCGCGGGCCCGTTCACAACCCCTCGGAAC
CCAGCGTCCACTGCCATGGGCAGCTCCGTGCCCGCTACTGCCAGCCCATCACCCTGTG
ACGGCTTCTGCCTCCGTGACTGTGCGCCGTGACCCGCGCCTGTCCCTGGGCCTGGGCGG
AACCCCGAGGGGGACTCTGCCAGGCTACCCTGAGACTGACCACGGCCTGTTTGAGGAC
CCCCACGTGCCTTTCCAGTCCGGTGTGAGAGGAGGGATTGGAAGTGAAGTCAATTGAG
CTGCAGGACGTGGAATGCGAGGAGAGGCCCCGGGAAGCAGCTCCAAC
    
```

- Restriction Sites:** Please inquire
- ACCN:** NM_001083607
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- OTI Annotation:** This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
- 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_001083607.1](#), [NP_001077076.1](#)

RefSeq Size: 7831 bp

RefSeq ORF: 3891 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 (1e) differs in the 5' UTR and has multiple differences in the 5' coding region, compared to variant 1b. These differences cause translation initiation from a downstream ATG and an isoform (S) with a shorter N-terminus, compared to isoform L. Variants 1c, 1c', 1d, and 1e encode the same isoform (S).