

Product datasheet for **RG220660**

PTCH1 (NM_001083606) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: PTCH1 (NM_001083606) Human Tagged ORF Clone
Tag: TurboGFP
Symbol: PTCH1
Synonyms: BCNS; NBCCS; PTC; PTC1; PTCH
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >RG220660 representing NM_001083606
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCCGGATCGCC

ATGTTTAACTCCTCAACTCATGATACAGACCCCTAAAGAAGAAGGTGCTAATGTCCTGACCACAGAAGCGC
 TCCTACAACACCTGGACTCGGCACTCCAGGCCAGCCGTGCCATGTATACATGTACAACAGGCAGTGGA
 ATTGGAACATTTGTGTTACAAATCAGGAGAGCTTATCACAGAAACAGGTTACATGGATCAGATAATAGAA
 TATCTTTACCCTTGTGTTGATTATTACACCTTTGGACTGCTTCTGGGAAGGGCGAAATTACAGTCTGGGA
 CAGCATACTCCTAGGTAACCTCCTTTGCGGTGGACAACTTCGACCCTTTGGAATTCCTGGAAGAGTT
 AAAGAAAATAAACTATCAAGTGGACAGCTGGGAGGAAATGCTGAATAAGGCTGAGTTGGTCATGGTTAC
 ATGGACCGCCCTGCCTCAATCCGGCCGATCCAGACTGCCCGCCACAGCCCCAACAAAAATCAACCA
 AACCTCTTGATATGGCCCTTGTGTTGAATGGTGGATGTCATGGCTTATCCAGAAAGTATATGCACTGGCA
 GGAGGAGTTGATTGTGGGTGGCAGAGTCAAGAACAGCACTGGAAAACCTCGTCAGCGCCCATGCCCTGCAG
 ACCATGTTCCAGTTAATGACTCCCAAGCAAATGTACGAGCACTTCAAGGGGTACGAGTATGTCTCACACA
 TCAACTGGAACGAGGACAAAGCGGCAGCCATCCTGGAGGCTGGCAGAGGACATATGTGGAGGTGGTTCA
 TCAGAGTGTGCGACAGAACTCCACTCAAAGGTGCTTTCCCTTACCACCACGACCCTGGACGACATCCTG
 AAATCCTTCTGACGTCAAGTGTATCCGCGTGGCCAGCGGCTACTTACTCATGCTCGCCTATGCCTGTC
 TAACCATGCTGCGCTGGGACTGCTCCAAGTCCCAGGGTGGCGTGGGCTGGCTGGCGTCTGCTGGTTGC
 ACTGTCACTGGCTGCAGGACTGGCCTGTGCTCATTGATCGGAATTTCTTTAACGCTGCAACAACCTCAG
 GTTTTGCCATTTCTCGCTCTTGGTGTGGTGTGGATGATGTTTTCTTCTGGCCACGCCTTCAGTGAAA
 CAGGACAGAATAAAGAATCCCTTTGAGGACAGGACCGGGAGTGCCTGAAGCGCACAGGAGCCAGCGT
 GGCCCTCAGTCCATCAGCAATGCACAGCCTTCTTATGGCCGCGTAAATCCCAATTCCTGCTGCGG
 GCGTTCTCCCTCCAGGCAGCGGTAGTAGTGGTGTCAATTTGCCATGGTTCTGCTATTTTCTGCAA
 TTCTCAGCATGGATTTATATCGACGCGAGGACAGGAGACTGGATATTTTCTGCTGTTTTACAAGCCCTG
 CGTCAGCAGAGTGATTGAGTTGAACCTCAGGCCTACACCGACACACACACAATACCCGCTACAGCCCC



[View online >](#)

CCACCTCCCTACAGCAGCCACAGCTTTGCCCATGAAACGCAGATTACCATGCAGTCCACTGTCCAGCTCC
GCACGGAGTACGACCCCCACACGCACGTGTACTACACCACCGCTGAGCCGCGCTCCGAGATCTCTGTGCA
GCCCGTACCCGTGACACAGGACACCCTCAGCTGCCAGAGCCCAGAGAGCACCAGCTCCACAAGGGACCTG
CTCTCCAGTTCTCCGACTCCAGCTCCACTGCCTCGAGCCCCCTGTACGAAGTGGACTCTCATCTT
TTGCTGAGAAGCACTATGCTCCTTCTCTTGAACCAAAAAGCCAAGGTAGTGGTGATCTTCCTTTTTCT
GGGCTTGCTGGGGTCAGCCTTTATGGCACCACCCGAGTGAGAGACGGGCTGGACCTTACGGACATTGTA
CCTCGGAAACCAGAGAATATGACTTTATTGCTGCACAATCAAATACTTTTCTTACAACATGTATA
TAGTCACCCAGAAAGCAGACTACCCGAATATCCAGCACTTACTTTACGACCTACACAGGAGTTTCAGTAA
CGTGAAGTATGTCATGTTGGAAGAAAACAACAGCTTCCCAAAATGTGGCTGCACTACTTCAGAGACTGG
CTTCAGGGACTTCAGGATGCATTGACAGTGACTGGGAAACCGGAAAATCATGCCAAACAATTACAAGA
ATGGATCAGACGATGGAGTCCTTGCTACAAAACCTCTGGTGCAAACCGGCAGCCGCGATAAGCCCATCGA
CATCAGCCAGTTGACTAAACAGCGTCTGGTGGATGCAGATGGCATCATTAAATCCCAGCGCTTTCTACATC
TACCTGACGGCTTGGGTCCAGCAACGACCCCGTCGCGTATGCTGCCTCCAGGCCAACATCCGGCCACACC
GACCAGAAATGGGTCCACGACAAAGCCGACTACATGCCTGAAACAAGGCTGAGAATCCCGGCAGCAGACC
CATCGAGTATGCCAGTTCCTTTCTACCTCAACGGCTTGGGGACACCTCAGACTTTGTGGAGGCAATT
GAAAAAGTAAGGACCATCTGCAGCAACTATACGAGCCTGGGGCTGTCCAGTTACCCCAACGGCTACCCCT
TCCTCTTCTGGGAGCAGTACATCGGCCTCCGCCACTGGCTGCTGCTGTTTCATCAGCGTGGTGTGGCCTG
CACATTCCTCGTGTGCGCTGTCTTCTTGAACCCCTGGACGGCCGGGATCATTGTGATGGTCTGGCG
CTGATGACGGTCGAGCTGTTCCGCATGATGGGCCTCATCGGAATCAAGCTCAGTGCCGTGCCCGTGGTCA
TCCTGATCGTCTTGTGGCATAGGAGTGGAGTTCACCGTTCACGTTGCTTTGGCCTTTCTGACGGCCAT
CGGCGACAAGAACCGCAGGGCTGTGCTTGCCTGGAGCACATGTTTGACCCGTCCTGGATGGCGCCGTG
TCCACTCTGCTGGGAGTCTGATGCTGGCGGATCTGAGTTCGACTTCATTGTGAGGATTTCTTTGCTG
TGCTGGGATCCTCACCATCCTCGGCTTCTCAATGGGCTGGTTTTGCTTCCCGTCTTTGCTTTTCTT
TGGACCATATCCTGAGGTGTCTCCAGCCAACGGCTTGAACCGCCTGCCACACCCCTCCCCTGAGCCACCC
CCCAGCGTGGTCCGCTTCCGCATGCCGCCCGGCCACACGCACAGCGGGTCTGATTCTCCGACTCGGAGT
ATAGTTCCAGACGACAGTGTGAGGCCTCAGCGAGGAGCTTCGGCACTACGAGGCCAGCAGGGCGCGGG
AGGCCCTGCCACCAAGTATCGTGGAAGCCACAGAAAACCCCGTCTTCGCCACTCCACTGTGGTCCAT
CCCGAATCCAGGCATCACCCACCCTCGAACCCGAGACAGCAGCCACCTGGACTCAGGGTCCCTGCCTC
CCGGACGGCAAGGCCAGCAGCCCCGAGGGACCCCCCAGAGAAGGCTTGTGGCCACCCCTACAGACC
GCGCAGAGACGCTTTTGAATTTCTACTGAAGGGCATTCTGGCCCTAGCAATAGGGCCCGCTGGGGCCCT
CGCGGGGCCGTTCTCACAACCCTCGGAACCCAGCGTCCACTGCCATGGGCAGCTCCGTGCCCGGCTACT
GCCAGCCATCACCACTGTGACGGCTTCTGCCTCCGTGACTGTCGCCGTGCACCCGCCGCTGTCCCTGG
GCCTGGGCGGAACCCCGAGGGGACTCTGCCAGGCTACCCTGAGACTGACCACGGCCTGTTTGAGGAC
CCCCAGTGCCTTCCACGTCCGGTGTGAGAGGAGGGATTCAAGGTGGAAGTCATTGAGCTGCAGGACG
TGAATGCGAGGAGAGGCCCGGGGAAGCAGCTCCAAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG220660 representing NM_001083606
 Red=Cloning site Green=Tags(s)

MFNPQLMIQTPKEEGANVLTTEALLQHLDLQASRVHVYMYNRQWKLEHLCKYKSGELITETGYMDQIEE
 YLYPCLIIITPLDCFWEQAKLQSGTAYLLGKPLRWTNFDPLEFLEELKKINYQVDSWEMLNKAIEVGHGY
 MDRPCLNPADPCPATAPNKNSTKPLDMALVLNGGCHGLSRKYMHWQEELIVGGTVKNSTGKLVSAHALQ
 TMFQLMTPKQMYEHFKGYEYVSHINWNEDKAAAILAEWQRTYVEVVHQSV AQNSTQKLVSF TTTTLDLDDIL
 KSFSDVSVIRVASGYLLMLAYACL TMLRWDCSKSQGAVGLAGVLLVALSVAAGLGLCSLIGISFNAATTQ
 VLPFLALGVGVDDVFLLAHAFSETGQNKRIPIFEDRTGECLKRTGASVALTSISNVTAFFMAALIPALR
 AFSLQAAVVVVFNAMVLLIFPAILSMDLYRREDRRLDIFCCFTSPCVSRVIQVEPQAYTDTHDNTRYSP
 PPPYSSHSFAHETQITMQSTVQLRTEYDPHTHYVYTTAEPRSEISVQPVTVTQDTLSCQSPESTSSTRDL
 LSQFSDSSLHCLPEPCKWTLSSFAEKHYAPFLKPKAKVVVIFLFLGLLGVSLYGTTRVRDGLDLTDIV
 PRETREYDFIAAQFKYFSFYNYIVTQKADYPNIQHLLYDLHRFSNVKYVMLEENKQLPKMWLHYFRDW
 LQGLQDAFSDWETGKIMPNNYKNGSDDGVLAYKLLVQTGSRDKPIDISQLTKQRLVDADGIINPSAFYI
 YLTAWVSNDPVAYAASQANIRPHRPEVHDKADYMPETRLRIPAAEPIEY AQFPFYLNGLRDTSDFVEAI
 EKVRTICSNYTSLGLSSYPNGYPFLFWEQYIGLRHWLLFI SVVLACTFLVCAVFLLNPNWTAGIIVMVL
 LMTVELFGMMGLIGIKLSAVPVVILIASVIGVEFTVHVALAFLTAIGDKNRRVALALEHMFAPVLDGAV
 STLLGVMLLAGSEFDIVRYFFAVLAAILILGVLNGLVLLPVLLSFFGPYPEVSPANGLNRLPTPSPEPP
 PSVVRFAMPPGHTHSGSDSSDSEYSSQTTVSGLSEELRHVEAQQGAGGPAHQVIVEATENPVFAHSTVVH
 PESRHHPPSNRQPHLDSGSLPPGRGQQPRRDPPREGLWPPPYRPRRDAFEISTEGHSGPSNRARWGP
 RGARSHNPRNPASTAMGSSVPGYCPITTTV TASASVTVAVHPPVPVPGGRNPRGGLCPGYPETDHGLFED
 PHVFFHRCERRDSKVEVIELQDVECEERPRGSSSN

TRTRPLE - GFP Tag - V

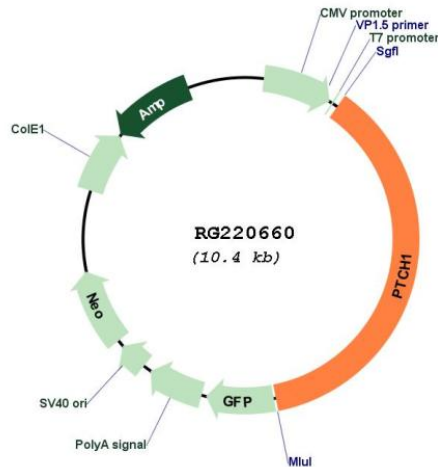
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001083606

ORF Size: 3888 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_001083606.3](#)

RefSeq Size: 7757 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:	<p>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]</p>