

## Product datasheet for **RG211551**

### PTCH1 (NM\_001083607) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PTCH1 (NM_001083607) 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:	>RG211551 representing NM_001083607 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTTTAACTCCTCAACTCATGATACAGACCCCTAAAGAAGAAGGTGCTAATGTCCTGACCACAGAAGCGC  
TCCTACAACACCTGGACTCGGCACTCCAGGCCAGCCGTGCCATGTATACATGTACAACAGGCAGTGGA  
ATTGGAACATTTGTGTTACAAATCAGGAGAGCTTATCACAGAAACAGGTTACATGGATCAGATAATAGAA  
TATCTTTACCCTTGTGTTGATTATTACACCTTTGGACTGCTTCTGGGAAGGGCGAAATTACAGTCTGGGA  
CAGCATACTCCTAGGTAACCTCCTTTGCGGTGGACAACTTCGACCCTTTGGAATTCCTGGAAGAGTT  
AAAGAAAATAAACTATCAAGTGGACAGCTGGGAGGAAATGCTGAATAAGGCTGAGTTGGTCATGGTTAC  
ATGGACCGCCCTGCCTCAATCCGGCCGATCCAGACTGCCCGCCACAGCCCCAACAAAAATCAACCA  
AACCTCTTGATATGGCCCTTGTGTTGAATGGTGGATGTCATGGCTTATCCAGAAAGTATATGCACTGGCA  
GGAGGAGTTGATTGTGGGTGGCAGAGTCAAGAACAGCACTGGAAAACCTCGTCAGCGCCCATGCCCTGCAG  
ACCATGTTCCAGTTAATGACTCCCAAGCAAATGTACGAGCACTTCAAGGGGTACGAGTATGTCTCACACA  
TCAACTGGAACGAGGACAAAGCGGCAGCCATCCTGGAGGCTGGCAGAGGACATATGTGGAGGTGGTTCA  
TCAGAGTGTGCGACAGAAGTCCACTCAAAGGTGCTTTCCCTTACCACCACGACCCTGGACGACATCCTG  
AAATCCTTCTGACGTCAAGTGTATCCGCGTGGCCAGCGGCTACTTACTCATGCTCGCCTATGCCTGTC  
TAACCATGCTGCGCTGGGACTGCTCCAAGTCCCAGGGTGGCGTGGGCTGGCTGGCGTCTGCTGGTTGC  
ACTGTCAAGTGGCTGCAGGACTGGGCTGTGCTCATTGATCGGAATTTCTTTAACGCTGCAACAACCTCAG  
GTTTTGCCATTTCTCGCTCTTGGTGTGGTGTGGATGATGTTTTCTTCTGGCCACGCCTTCAGTGAAA  
CAGGACAGAATAAAGAATCCCTTTGAGGACAGGACCGGGAGTGCCTGAAGCGCACAGGAGCCAGCGT  
GGCCCTCAGTCCATCAGCAATGTACAGCCTTCTTATGGCCGCGTAAATCCCAATTCCTGCTGCGG  
GCGTTCTCCCTCAGGACGCGGTAGTAGTGGTGTCAATTTGCCATGGTTCTGCTATTTTCTGCAA  
TTCTCAGCATGGATTTATATCGACGCGAGGACAGGAGACTGGATATTTTCTGCTGTTTTACAAGCCCTG  
CGTCAGCAGAGTGATTAGGTTGAACCTCAGGCCTACACCGACACACAGACAATACCCGCTACAGCCCC



[View online >](#)

CCACCTCCCTACAGCAGCCACAGCTTTGCCCATGAAACGCAGATTACCATGCAGTCCACTGTCCAGCTCC  
GCACGGAGTACGACCCCCACACGCACGTGTACTACACCACCGCTGAGCCGCGCTCCGAGATCTCTGTGCA  
GCCCGTACCCGTGACACAGGACACCCTCAGCTGCCAGAGCCCAGAGAGCACCAGCTCCACAAGGGACCTG  
CTCTCCAGTTCTCCGACTCCAGCTCCACTGCCTCGAGCCCCCTGTACGAAGTGGACTCTCATCTT  
TTGCTGAGAAGCACTATGCTCCTTCTCTTGAACCAAAAAGCCAAGGTAGTGGTGATCTTCCTTTTTCT  
GGGCTTGCTGGGGTCAGCCTTTATGGCACCACCCGAGTGAGAGACGGGCTGGACCTTACGGACATTGTA  
CCTCGGGAACCCAGAGAATATGACTTTATTGCTGCACAATTCAAATACTTTTCTTACAACATGTATA  
TAGTCACCCAGAAAAGCAGACTACCCGAATATCCAGCACTTACTTTACGACCTACACAGGAGTTTCAGTAA  
CGTGAAGTATGTCATGTTGGAAGAAAACAAACAGCTTCCCAAAATGTGGCTGCACTACTTCAGAGACTGG  
CTTCAGGGACTTCAGGATGCATTGACAGTGACTGGGAAACCGGAAAATCATGCCAAACAATTACAAGA  
ATGGATCAGACGATGGAGTCCTTGCCACAAAACCTCTGGTGCAAACCGGCAGCCGCGATAAGCCCATCGA  
CATCAGCCAGTTGACTAAACAGCGTCTGGTGGATGCAGATGGCATCATTAAATCCCAGCGCTTTCTACATC  
TACCTGACGGCTTGGGTCCAGCAACGACCCCGTCGCGTATGCTGCCTCCAGGCCAACATCCGGCCACACC  
GACCAGAAATGGGTCCACGACAAAAGCCGACTACATGCCTGAAACAAGGCTGAGAATCCCGGCAGCAGACC  
CATCGAGTATGCCAGTTCCTTTCTACCTCAACGGCTTGGGGACACCTCAGACTTTGTGGAGGCAATT  
GAAAAAGTAAGGACCATCTGCAGCAACTATACGAGCCTGGGGCTGTCCAGTTACCCCAACGGCTACCCCT  
TCCTCTTCTGGGAGCAGTACATCGGCCTCCGCCACTGGCTGCTGCTGTTTCATCAGCGTGGTGTGGCCTG  
CACATTCCTCGTGTGCGCTGTCTTCTTCTGAACCCCTGGACGGCCGGGATCATTGTGATGGTCTGGCG  
CTGATGACGGTCGAGCTGTTCCGGATGATGGGCCTCATCGGAATCAAGCTCAGTGCCGTGCCCGTGGTCA  
TCCTGATCGTCTTCTGTTGGCATAGGAGTGGAGTTCACCGTTCACGTTGCTTTGGCCTTTCTGACGGCCAT  
CGGCGACAAGAACCGCAGGGCTGTGCTTGCCTGGAGCACATGTTTGACCCGTCCTGGATGGCGCCGTG  
TCCACTCTGCTGGGAGTCTGATGCTGGCGGATCTGAGTTCGACTTCATTGTGAGGATTTCTTTGCTG  
TGCTGGGATCCTCACCATCCTCGGCTTCTCAATGGCTGGTTTTGCTTCCCGTCTTTGCTCTTCTTCTT  
TGACCATATCCTGAGGTGTCTCCAGCCAACGGCTTGAACCGCCTGCCACACCCCTCCCTGAGCCACCC  
CCCAGCGTGGTCCGCTTCCGATGCCGCCCGGCCACACGCACAGCGGGTCTGATTCTCCGACTCGGAGT  
ATAGTTCACAGACGACAGTGTGAGGCTCAGCGAGGAGCTTCGGCACTACGAGGCCACAGGGCGCGGG  
AGGCCCTGCCACCAAGTATCGTGGAAGCCACAGAAAACCCCGTCTTCGCCACTCCACTGTGGTCCAT  
CCCGAATCCAGGCATCACCACCCTCGAACCCGAGACAGCAGCCACCTGGACTCAGGGTCCCTGCCTC  
CCGACGGCAAGGCCAGCAGCCCGCAGGGACCCCCAGAGAAGGCTTGTGGCCACCCCTACAGACC  
GCGCAGAGACGCTTTTGAATTTCTACTGAAGGGCATTCTGGCCCTAGCAATAGGGCCCGCTGGGGCCCT  
CGCGGGGCCGTTCTCACAACCCTCGGAACCCAGCGTCCACTGCCATGGGCAGCTCCGTGCCCGGCTACT  
GCCAGCCATCACCAGTGTGACGGCTTCTGCCTCCGTGACTGTCGCCGTGCACCCGCCCTGTCCCTGG  
GCCTGGGCGGAACCCCGAGGGGACTCTGCCAGGCTACCCTGAGACTGACCACGGCTGTTTGAGGAC  
CCCCAGTGCCTTCCAGTCCGGTGTGAGAGGAGGGATTCAAGGTGGAAGTCATTGAGCTGCAGGACG  
TGAATGCGAGGAGAGGCCCCCGGGAAGCAGCTCCAAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG211551 representing NM\_001083607  
 Red=Cloning site Green=Tags(s)

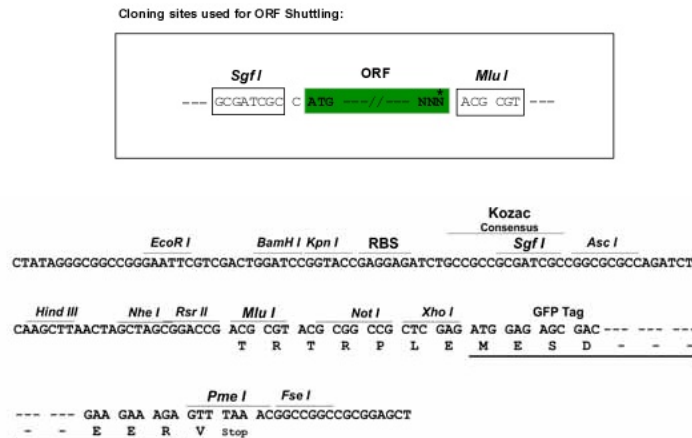
MFNPQLMIQTPKEEGANVLTTEALLQHLDLQASRVHVYMYNRQWKLEHLCYKSGELITETGYMDQIEE  
 YLYPCLIIITPLDCFWEQAKLQSGTAYLLGKPLRWTNFDPLEFLEELKKINYQVDSWEMLNKAIEVGHGY  
 MDRPCLNPADPCPATAPNKNSTKPLDMALVLNGGCHGLSRKYMHWQEELIVGGTVKNSTGKLVSAHALQ  
 TMFQLMTPKQMYEHFKGYEYVSHINWNEDKAAAILEAWQRTYVEVVHQSVAAQNSTQKLVSTTTTLDLIL  
 KSFSDVSVIRVAGYLLMLAYACLTLRWDCSKSQGAVGLAGVLLVALSVAAGLGLCSLIGISFNAATTQ  
 VLPFLALGVGVDDVFLLAHAFSETGQNKRIPIFEDRTGECLKRTGASVALTSSINVTAFFMAALIPALR  
 AFSLQAIVVVVFNAMVLLIFPAILSMDLYRREDRRLDIFCCFTSPCVSRVIQVEPQAYTDTHDNTRYSP  
 PPPYSSHSFAHETQITMQSTVQLRTEYDPHTHYVYTTAEPRSEISVQPVTVTQDTLSCQSPESTSSTRDL  
 LSQFSDSSLHCLPEPCTKWLSSFAEKHYAPFLKPKAKVVVIFLFLGLLGVSLYGTTRVRDGLDLTDIV  
 PRETREYDFIAAQFKYFSFYNYIVTQKADYPNIQHLLYDLHRFSNVKYVMLEENKQLPKMWLHYFRDW  
 LQGLQDAFSDWETGKIMPNNYKNGSDDGVLAYKLLVQTGSRDKPIDISQLTKQRLVDADGIINPSAFYI  
 YLTAWVSNPVAASAQANIRPHRPEVHDKADYMPETRLRIPAAEPIEYQFPFYLNGLRDTSDFVEAI  
 EKVRTICSNYTSLGLSSYPNGYPFLFWEQYIGLRHWLLFI SVVLACTFLVCAVFLLNPNWTAGIIVMVA  
 LMTVELFGMMGLIGIKLSAVPVVILIASVIGVEFTVHVALAFLTAIGDKNRRVALALEHMFAPVLDGAV  
 STLLGLVMLAGSEFDIVRYFFAVLAILILGVLNGLVLLPVLLSFFGPYPEVSPANGLNRLPTPSPEPP  
 PSVVRFAMPPGHTHSGSDSSDSEYSSQTTVSGLSEELRHVEAQQGAGGPAHQVIVEATENPVFAHSTVVH  
 PESRHHPPSNPRQQPHLDSGSLPPGRGQQPRRDPPREGLWPPPYRPRRDAFEISTEGHSGPSNRARWGP  
 RGARSHNPRNPASTAMGSSVPGYQPIITVTASVTVAVHPPPVPGPRNPRGGLCPGPETDHGLFED  
 PHVFFHRCERRDSKVEVIELQDVECEERPRGSSSN

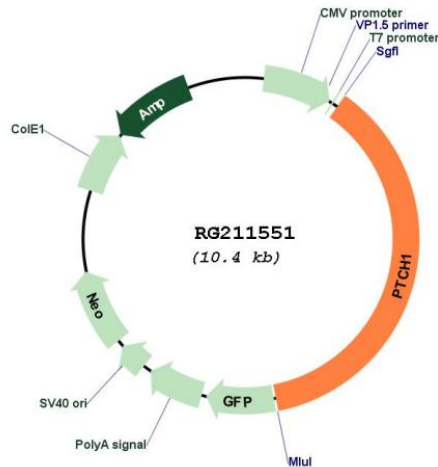
TRTRPLE - GFP Tag - V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**


**ACCN:** NM\_001083607

**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\\_001083607.2](#)

**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]