

## Product datasheet for RC216999

### PTCH1 (NM\_000264) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PTCH1 (NM_000264) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PTCH1
Synonyms:	BCNS; NBCCS; PTC; PTC1; PTCH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC216999 representing NM_000264 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCCTCGGCTGGTAACGCCGCCGAGCCCCAGGACCGCGGGCGGGCGGCAGCGGCTGTATCGGTGCC  
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 C

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
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**Protein Sequence:** >RC216999 representing NM\_000264  
 Red=Cloning site Green=Tags(s)

MASAGNAEAPQDRGGGSGCIGAPGRPAGGRRRRTGGLRRAAPDRDYLRPSYCDAFALEQISKGKA  
 TGRKAPLWLRKAFQRLFLKLCYIQKNCGKFLVGLLIFGAFVGLKAANLETNVEELWVEVGGRVSR  
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 TETGYMDQIIIEYLYPCLIIITPLDCFWEAGAKLSGTAYLLGKPLRWTNFDPLEFLEELKKINYQVDSWEE  
 MLNKAIEVGHGYMDRPLNPAADPCPATAPKNSTKPLDMALVLNGGCHGLSRKYMHWQEELIVGGTVKNS  
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 MAALIPALRAFSLQA VVVVFNFAVLLIFPAILSMDLYRREDRRLDIFCCFTSPCVSRVIQVEPQAY  
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 HMFAPVLDGAVSTLLGVLMLAGSEDFIVRYFFAVLAILTILGVLNGLVLLPVLLSFFGYPYEVSPANGL  
 NRLPTPSPEPPPSVVRFA MPPGHTHSGSDSSDSEYSSQTTVSGLSEELRHYEAAQQGAGGPAHQVIVEATE  
 NPVFAHSTVVHPE SRHHPPSNPRQPHLDSGSLPPGRQGGQPRRDPPREGLWPPPYRPRRDAFEISTEGH  
 SGPSNRRARWGPARGARSHNPRNPASTAMGSSVPGYCQPIITVTASASVTVAHVHPPVPVGPGRNPRGGLCPG  
 YPETDHGLFEDPHVPHVRCERRDSKVEVIELQDVECEERPRGSSSN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_000264

**ORF Size:** 4341 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:** 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\\_000264.5](#)

**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

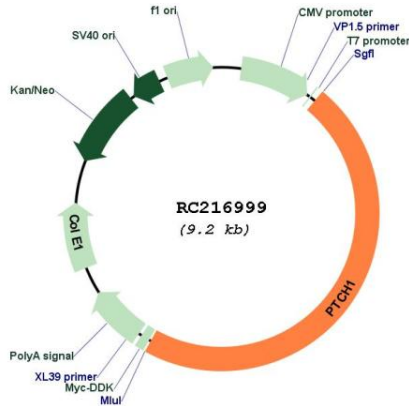
**Protein Pathways:** Basal cell carcinoma, Hedgehog signaling pathway, Pathways in cancer

**MW:** 160.4 kDa

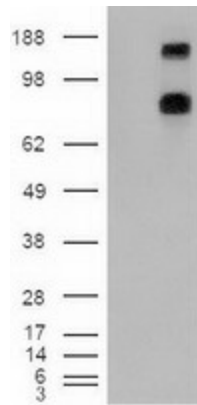
**Gene Summary:**

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]

**Product images:**



Circular map for RC216999



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PTCH1 (Cat# RC216999, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-PTCH1(Cat# [TA500123]). Positive lysates [LY424834] (100ug) and [LC424834] (20ug) can be purchased separately from OriGene.