**OriGene Technologies, Inc.**
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

# Product datasheet for KN211551

## PTCH1 Human Gene Knockout Kit (CRISPR)

### Product data:

**Product Type:** Knockout Kits (CRISPR)

**Format:** 2 gRNA vectors, 1 GFP-puro donor, 1 scramble control

**Donor DNA:** GFP-puro

**Symbol:** PTCH1

**Locus ID:** 5727

**Components:** **KN211551G1**, PTCH1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: TGTAAAAACCCCGGCGCGCT
**KN211551G2**, PTCH1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: ACTCCGCCGAAAGCCTCCGG
**KN211551D**, donor DNA containing left and right homologous arms and GFP-puro functional cassette.
Homologous arm and GFP-puro sequences:
pUC vector backbone in gray; Left arm sequence in blue; GFP-puro in green; Right arm in violet

```
GATCGTTGGG AACCGGAGCT GAATGAAGCC ATACCAAACG ACGAGCGTGA CACCACGATG CCTGTAGCAA
TGGCAACAAC GTTGCGCAAA CTATTAACTG GCGAACTACT TACTCTAGCT TCCCGGCAAC AATTAATAGA
CTGGATGGAG GCGGATAAAG TTGCAGGACC ACTTCTGCGC TCGGCCCTTC CGGCTGGCTG GTTTATTGCT
GATAAATCTG GAGCCGGTGA GCGTGGTTCT CGCGGTATCA TTGCAGCACT GGGGCCAGAT GGTAAGCCCT
CCCGTATCGT AGTTATCTAC ACGACGGGGA GTCAGGCAAC TATGGATGAA CGAAATAGAC AGATCGCTGA
GATAGGTGCC TCACTGATTA AGCATTGGTA ACTGTCAGAC CAAGTTTACT CATATATACT TTAGATTGAT
TTAAAACTTC ATTTTTAATT TAAAAGGATC TAGGTGAAGA TCCTTTTTGA TAATCTCATG ACCAAAATCC
CTTAACGTGA GTTTTCGTTC CACTGAGCGT CAGACCCCGT AGAAAAGATC AAAGGATCTT CTTGAGATCC
TTTTTTTCTG CGCGTAATCT GCTGCTTGCA AACAAAAAAA CCACCGCTAC CAGCGGTGGT TTGTTTGCCG
GATCAAGAGC TACCAACTCT TTTTCCGAAG GTAACTGGCT TCAGCAGAGC GCAGATACCA AATACTGTTC
TTCTAGTGTA GCCGTAGTTA GGCCACCACT TCAAGAACTC TGTAGCACCG CCTACATACC TCGCTCTGCT
AATCCTGTTA CCAGTGGCTG CTGCCAGTGG CGATAAGTCG TGTCTTACCG GGTTGGACTC AAGACGATAG
TTACCGGATA AGGCGCAGCG GTCGGGCTGA ACGGGGGGTT CGTGCACACA GCCCAGCTTG GAGCGAACGA
CCTACACCGA ACTGAGATAC CTACAGCGTG AGCTATGAGA AAGCGCCACG CTTCCCGAAG GGAGAAAGGC
GGACAGGTAT CCGGTAAGCG GCAGGGTCGG AACAGGAGAG CGCACGAGGG AGCTTCCAGG GGGAAACGCC
TGGTATCTTT ATAGTCCTGT CGGGTTTCGC CACCTCTGAC TTGAGCGTCG ATTTTTGTGA TGCTCGTCAG
GGGGGCGGAG CCTATGGAAA AACGCCAGCA ACGCGGCCTT TTTACGGTTC CTGGCCTTTT GCTGGCCTTT
TGCTCACATG TTCTTTCCTG CGTTATCCCC TGATTCTGTG GATAACCGTA TTACCGCCTT TGAGTGAGCT
GATACCGCTC GCCGCAGCCG AACGACCGAG CGCAGCGAGT CAGTGAGCGA GGAAGCGGAA GAGCGCCCAA
TACGCAAACC GCCTCTCCCC GCGCGTTGGC CGATTCATTA ATGCAGCTGG CACGACAGGT TTCCCGACTG
GAAAGCGGGC AGTGAGCGCA ACGCAATTAA TGTGAGTTAG CTCACTCATT AGGCACCCCA GGCTTTACAC
TTTATGCTTC CGGCTCGTAT GTTGTGTGGA ATTGTGAGCG GATAACAATT TCACACAGGA AACAGCTATG
ACCATGATTA CGCCAAGCTC CTTCCTCTTC CAGCCCTTCC TCTTTCACAC TGACTGACTG ACCTGCATAC
```

View online »

ACCTCCGGGA AGGCGCTGTG ATCTGTCCGG TTTTCCTGCT CCCCGCCCCT CTGGCGGCCC GTAGGCCTGT
CATCTAGAAG GCTCCCAGCT TTTCCGCGCT TCCGTGGGAA TGCGAGAAGG AAAGGCTTTG AGAATGCAAG
CATGAAAGGT GGTGTTCTTC TGCAGTCCTC TGGGAACCCC CCACTTCCCG GACCGCTGAG GATGCTAAAA
GGAGCTTCCT TGCTTCCCCA CACCTCCCCC GACCGGCGTT GGGACAAGAT GGCCAAATGT TAGCAAATAA
TGTGTGCGGG GGCGGGGGAG CCGAGCACAA GGTGGAGAAG CCGCGGGAGC GCGCGGAGAC CCCCAGCCCG
GCGGCCCCCC GCAAACACGG CCGCGGGGGG CGGGGAGAGG GTGGCTAGGC TCGCGGGAGC TCGCCGGGCA
GGGCGCCTCC CAGGAAGGCG GGGAGGGGAG CGCCTGTTTA CCCAGGAGGG CTGTGCTGAT AGCACGTTCC
TCGAGTTTAC TTTGCTTTCC TTGAGTTTAT TGTAAAGGGG TAAAGTTTTC GGATCCGTCA CGTGACCCTG
ACAGGTCCTG CCTATGGCGC GGCAGACCAC CCACGCCGAG GGCCACTAGC ATGGAGAGCG ACGAGAGCGG
CCTGCCCGCC ATGGAGATCG AGTGCCGCAT CACCGGCACC CTGAACGGCG TGGAGTTCGA GCTGGTGGGC
GGCGGAGAGG GCACCCCCGA GCAGGGCCGC ATGACCAACA AGATGAAGAG CACCAAAGGC GCCCTGACCT
TCAGCCCCTA CCTGCTGAGC CACGTGATGG GCTACGGCTT CTACCACTTC GGCACCTACC CCAGCGGCTA
CGAGAACCCC TTCCTGCACG CCATCAACAA CGGCGGCTAC ACCAACACCC GCATCGAGAA GTACGAGGAC
GGCGGCGTGC TGCACGTGAG CTTCAGCTAC CGCTACGAGG CCGGCCGCGT GATCGGCGAC TTCAAGGTGA
TGGGCACCGG CTTCCCCGAG GACAGCGTGA TCTTCACCGA CAAGATCATC CGCAGCAACG CCACCGTGGA
GCACCTGCAC CCCATGGGCG ATAACGATCT GGATGGCAGC TTCACCCGCA CCTTCAGCCT GCGCGACGGC
GGCTACTACA GCTCCGTGGT GGACAGCCAC ATGCACTTCA AGAGCGCCAT CCACCCCAGC ATCCTGCAGA
ACGGGGGCCC CATGTTCGCC TTCCGCCGCG TGGAGGAGGA TCACAGCAAC ACCGAGCTGG GCATCGTGGA
GTACCAGCAC GCCTTCAAGA CCCCGGATGC AGATGCCGGT GAAGAAAGAG TTTAAGAATT CCGATCATAT
TCAATAACCC TTAATATAAC TTCGTATAAT GTATGCTATA CGAAGTTATT AGGTCTGAAG AGGAGTTTAC
GTCCAGCCAA GCTTAGGATC TCGACCTCGA AATTCTACCG GGTAGGGGAG GCGCTTTTCC CAAGGCAGTC
TGGAGCATGC GCTTTAGCAG CCCCGCTGGG CACTTGGCGC TACACAAGTG GCCTCTGGCC TCGCACACAT
TCCACATCCA CCGGTAGGCG CCAACCGACT CCGTTCTTTG GTGGCCCCTT CGCGCCACCT TCTACTCCTC
CCCTAGTCAG GAAGTTCCCC CCCGCCCCGC AGCTCGCGTC GTGCAGGACG TGACAAATGG AAGTAGCACG
TCTCACTAGT CTCGTGCAGA TGGACAGCAC CGCTGAGCAA TGGAAGCGGG TAGGCCTTTG GGGCAGCGGC
CAATAGCAGC TTTGCTCCTT CGCTTTCTGG GCTCAGAGGC TGGGAAGGGG TGGGTCCGGG GGCGGGCTCA
GGGGCGGGCT CAGGGGCGGG GCGGGCGCCC GAAGGTCCTC CGGAGGCCCG GCATTCTGCA CGCTTCAAAA
GCGCACGTCT GCCGCGCTGT TCTCCTCTTC CTCATCTCCG GGCCTTTCGA CCTGCATCCA TCTAGATCTC
GAGCAGCTGA AGCTTACCAT GACCGAGTAC AAGCCCACGG TGCGCCTCGC CACCCGCGAC GACGTCCCCA
GGGCCGTACG CACCCTCGCC GCCGCGTTCG CCGACTACCC CGCCACGCGC CACACCGTCG ATCCGGACCG
CCACATCGAG CGGGTCACCG AGCTGCAAGA ACTCTTCCTC ACGCGCGTCG GGCTCGACAT CGGCAAGGTG
TGGGTCGCGG ACGACGGCGC CGCGGTGGCG GTCTGGACCA CGCCGGAGAG CGTCGAAGCG GGGGCGGTGT
TCGCCGAGAT CGGCCCGCGC ATGGCCGAGT TGAGCGGTTC CCGGCTGGCC GCGCAGCAAC AGATGGAAGG
CCTCCTGGCG CCGCACCGGC CCAAGGAGCC CGCGTGGTTC CTGGCCACCG TCGGCGTCTC GCCCGACCAC
CAGGGCAAGG GTCTGGGCAG CGCCGTCGTG CTCCCCGGAG TGGAGGCGGC CGAGCGCGCC GGGGTGCCCG
CCTTCCTGGA GACCTCCGCG CCCCACAACC TCCCCTTCTA CGAGCGGCTC GGCTTCACCG TCACCGCCGA
CGTCGAGGTG CCCGAAGGAC CGCGCACCTG GTGCATGACC CGCAAGCCCG GTGCCTGACG CCCGCCCCAC
GACCCGCAGC GCCCGACCGA AAGGAGCGCA CGACCCCATG CATCGATGAT ATCAGATCCC CGGGATGCAG
AAATTGATGA TCTATTAAAC AATAAAGATG TCCACTAAAA TGGAAGTTTT TCCTGTCATA CTTTGTTAAG
AAGGGTGAGA ACAGAGTACC TACATTTTGA ATGGAAGGAT TGGAGCTACG GGGGTGGGGG TGGGGTGGGA
TTAGATAAAT GCCTGCTCTT TACTGAAGGC TCTTTACTAT TGCTTTATGA TAATGTTTCA TAGTTGGATA
TCATAATTTA AACAAGCAAA ACCAAATTAA GGGCCAGCTC ATTCCTCCCA CTCATGATCT ATAGATCTAT
AGATCTCTCG TGGGATCATT GTTTTTCTCT TGATTCCCAC TTTGTGGTTC TAAGTACTGT GGTTTCCAAA
TGTGTCAGTT TCATAGCCTG AAGAACGAGA TCAGCAGCCT CTGTTCCACA TACACTTCAT TCTCAGTATT
GTTTTGCCAA GTTCTAATTC CATCAGAAGC TGGTCGAGAT CCGGAACCCT TAATATAACT TCGTATAATG
TATGCTATAC GAAGTTATTA GGTCCCTCGA AGAGGTTCAC TAGGCGCGCC GACCCGCAGC GACAAGGCAA
GGGGGAGACG AGGGAAGACT GGGAGAAGAC GGAGGAGCGG AGGACGAGGA AAGGGGGGCC AGGGAAAAAA
AAGGAATTGA TGTGAAATCC AAGCCCAGCG TCCGCGCCAT CGGCACCCGC GCTCCGAGCA GGGGTTGACG
GCCGGCTATG GTGAGTGCAG CCAGCGCGGC GGCCGCCGAC GCCACCTCGC CTCGCGCGCC GTGCTCCTCG
GGCGGCGCGG GGACACGGGG ACGCGGGACG CCCCGCGCGG CGGACGGAGG AGCGAGCCCC GAGCGCCGGG
CAGGAGGGGC GGGCCGCGCG CCGGGGCCGT GGAGCCGGGT GGGCTGCGCC GCCTGGGCGC GGGAGCGCGG
GTCCCGCGCC TCCACGCTCG CTCGCACGCC CGGGCCCCCG CCCCCGAGGC CAGCCCCGCG TGGCGGGGAG

GGGGCTGGCC GCGGCGGGCC CCGGCTGAGG AACGGCTCCG GGGGGAATTC TCACGGAGGG GGTCGCCGGA
GCTCCCATTT TCACGCCTGA AAGGGTCGCC ACCTTGGCTT CCGCTCATCA GCCTGGTGGT GGCTACTGAC
TCGCCAGCGG AGGCAGAGCT ACGAACTGGC AGGTACTGAC TGACTGGAAA GTCCTCTCCA CTGACTGTAG
CCTCCAATTC ACTGGCCGTC GTTTTACAAC GTCGTGACTG GGAAAACCCT GGCGTTACCC AACTTAATCG
CCTTGCAGCA CATCCCCCTT TCGCCAGCTG GCGTAATAGC GAAGAGGCCC GCACCGATCG CCCTTCCCAA
CAGTTGCGCA GCCTGAATGG CGAATGGCGC CTGATGCGGT ATTTTCTCCT TACGCATCTG TGCGGTATTT
CACACCGCAT ACGTCAAAGC AACCATAGTA CGCGCCCTGT AGCGGCGCAT TAAGCGCGGC GGGTGTGGTG
GTTACGCGCA GCGTGACCGC TACACTTGCC AGCGCCCTAG CGCCCGCTCC TTTCGCTTTC TTCCCTTCCT
TTCTCGCCAC GTTCGCCGGC TTTCCCCGTC AAGCTCTAAA TCGGGGGCTC CCTTTAGGGT TCCGATTTAG
TGCTTTACGG CACCTCGACC CCAAAAAACT TGATTTGGGT GATGGTTCAC GTAGTGGGCC ATCGCCCTGA
TAGACGGTTT TTCGCCCTTT GACGTTGGAG TCCACGTTCT TTAATAGTGG ACTCTTGTTC CAAACTGGAA
CAACACTCAA CCCTATCTCG GGCTATTCTT TTGATTTATA AGGGATTTTG CCGATTTCGG CCTATTGGTT
AAAAAATGAG CTGATTTAAC AAAAATTTAA CGCGAATTTT AACAAAATAT TAACGTTTAC AATTTTATGG
TGCACTCTCA GTACAATCTG CTCTGATGCC GCATAGTTAA GCCAGCCCCG ACACCCGCCA ACACCCGCTG
ACGCGCCCTG ACGGGCTTGT CTGCTCCCGG CATCCGCTTA CAGACAAGCT GTGACCGTCA ACGGGAGCTG
CATGTGTCAG AGGTTTTCAC CGTCATCACC GAAACGCGCG ACCCGAAAGG GCCTCGTGAT ACGCCTATTT
TTATAGGTTA ATGTCATGAT AATAATGGTT TCTTAGACGT CAGGTGGCAC TTTTCGGGGA AATGTGCGCG
GAACCCCTAT TTGTTTATTT TTCTAAATAC ATTCAAATAT GTATCCGCTC ATGAGACAAT AACCCTGATA
AATGCTTCAA TAATATTGAA AAAGGAAGAG TATGAGTATT CAACATTTCC GTGTCGCCCT TATTCCCTTT
TTTGCGGCAT TTTGCCTTCC TGTTTTTGCT CACCCAGAAA CGCTGGTGAA AGTAAAAGAT GCTGAAGATC
AGTTGGGTGC ACGAGTGGGT TACATCGAAC TGGATCTCAA CAGCGGTAAG ATCCTTGAGA GTTTTCGCCC
CGAAGAACGT TTTCCAATGA TGAGCACTTT TAAAGTTCTG CTATGTGGCG CGGTATTATC CCGTATTGAC
GCCGGGCAAG AGCAACTCGG TCGCCGCATA CACTATTCTC AGAATGACTT GGTTGAGTAC TCACCAGTCA
CAGAAAAGCA TCTTACGGAT GGCATGACAG TAAGAGAATT ATGCAGTGCT GCCATAACCA TGAGTGATAA
CACTGCGGCC AACTTACTTC TGACAACGAT CGGAGGACCG AAGGAGCTAA CCGCTTTTTT GCACAACATG
GGGGATCATG TAACTCGCCT T

**GE100003**, scramble sequence in pCas-Guide vector

**Disclaimer:** These products are manufactured and supplied by OriGene under license from ERS. The kit is designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the experimental process.

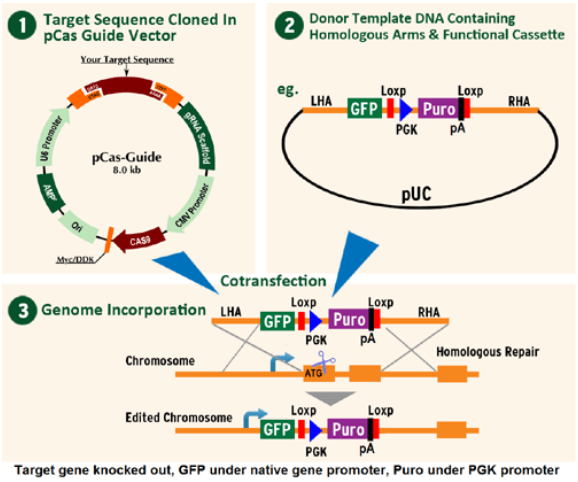
**RefSeq:** NM_000264, NM_001083602, NM_001083603, NM_001083604, NM_001083605, NM_001083606, NM_001083607, NM_001354918, NM_001354919, NR_149061

**UniProt ID:** Q13635

**Synonyms:** BCNS; HPE7; NBCCS; PTC; PTC1; PTCH; PTCH11

**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 smoothened, 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:




Target gene knocked out, GFP under native gene promoter, Puro under PGK promoter