

**Table S1. Sequences of primers used for genotyping**

Detection	Forward primers	Reverse primers
Recombined U6 promoter	5'-TCTAGA AACTGGATCCGAC-3'	5'-AGGCTTTTCTCCAAGGGATATT-3'
U6-ploxPneo-BCCIP	5'-TCTAGA AACTGGATCCGAC-3'	5'-TCGTATAGCATACATTATACG-3'
GFAP-Cre	5'-ACTCCTTCATAAAGCCCTCG-3'	5'-ATCACTCGTTGCATCGACCG-3'
p53 LoxP	5'-GGTTAAACCCAGCTTGACCA-3'	5'-GGAGGCAGAGACAGTTGGAG-3'
p53 Delta-exon 2-7	5'-CACAAAAACAGGTTAAACCCA-3'	5'-GAAGACAGAAAAGGGGAGGG-3'

Table S2. Primer information for qPCR

Gene	Primer ID (TaqMan gene expression assay, Applied Biosystems)
BCCIP	Mm01268809_m1
Ptch1	Mm00436026_m1
Smo	Mm01162710_m1
Gli1	Mm00494654_m1
Atoh1	Mm00476035_s1
N-myc	Mm00476449_m1
CyclinD1	Mm00432359_m1
CyclinD2	Mm00438070_m1

Table S3. Primers used to amplify and sequence the cDNA of BCCIP, PTEN, and Ptch1 fragments.

Ptch1 Fragments	Forward primers	Reverse primers
BCCIP	BCCIP-F: 5'-GCGCAGGCGCAGTGTGACCGG-3'	BCCIP-R : 5'-ATCTCTCAATGGGTTTCTTG-3'
PTEN	PTEN-F: 5'-ATGACAGCCATCATCAAAGA-3'	PTEN-R: 5'-TCAGACTTTTGTAAATTTGTG-3'
Ptch1-A (exon1-6)	Ptch1-AF: 5'-ATGGCCTCGGCTGGTAACG-3'	Ptch1-AR: 5'-AAGGCCGGTCCATGTACCCATGGC-3'
Ptch1-B (exon5-10)	Ptch1-BF: 5'-GCTTAATCATTACACCTTTGGACTGC-3'	Ptch1-BR: 5'-CTGAGTTGTGCGCAGCATTAAA-3'
Ptch1-C (exon9-14)	Ptch1-CF: 5'-TCCACTCAAAGGTGCTTCCC-3'	Ptch1-CR: 5'-AAAGGAGCATAGTGCTTCTCTGC-3'
Ptch1-D (exon14-18)	Ptch1-DF: 5'-TTGAGCCACAGGCCTACACAGAGC-3'	Ptch1-DR: 5'-GTCTGAGGTGTCTCGTAGGCCG-3'
Ptch1-E (exon15-21)	Ptch1-EF : 5'-TGGGAAACTGGGAGGATCATGC-3'	Ptch1-ER : 5'-GCTCAGGCGAAGGAGTGGGCAGTCG-3'
Ptch1-F (exon19-23)	Ptch1-FF : 5'-GTGGAGTTCACCGTCCACGTGGC-3'	Ptch1-FR : 5'- GAAGCGGCCGCTCAGTTGGAGCTGCTCCCC CACGGC-3'
Other BCCIP sequencing primers	BCCIP-F3: 5'-TTGCCCTGCCATGCACCAG-3'	BCCIP-R3: 5'-CAGCTCGGCAGTGTTACGGG-3'
Other PTEN Sequencing primers	PTEN-F3: 5'-CAAGGCCAACCGATACTTCT-3'	PTEN-R3: 5'-GTACAAGATACTCCTTGTC-3'

Table S4. The fractions of the medulloblastoma that have altered mRNA expression of the SHH pathway components (Results based on q-PCR analysis)

Gene	Loss of expression
Ptch1	16/24 (67%)
Gene	Gain of expression
Smo	12/12 (100%)
Gli1	12/12 (100%)
Atoh1	12/12 (100%)
N-myc	12/12 (100%)
CyclinD1	16/16 (100%)
CyclinD2	16/16 (100%)