

Proband ID	Gene mutated	Variant	Forward Primer	Reverse Primer
1	<i>HIF1A</i>	p.Val74Leu	ggaaacacctgcttccgaca	gggaggggaaaagccagtat
2	<i>HIF1A</i>	p.Pro239Leu	ctgggcaggaagtaggtcat	ggctgtgtcgactgaggaaa
3	<i>HIF1A</i>	p.Asp446Tyr	gtgaaaatccttgtggccgg	tccatcggaaggactaggtgt
4	<i>HIF1A</i>	p.Arg655His	aaagcgaagtcctcaaagc	acacgttagggcttcttggga
5	<i>HIF1A</i>	p.Ala678Val	ccactgccaccactgatgaa	tgagatggtgccatgccatt
6	<i>HIF1A</i>	p.Ser716Cys	actagtgccacatcatcacca	tgagatggtgccatgccatt
6	<i>IDH1</i>	p.Arg132His	atgtgttgagatggacgcct	atattctgggtggcacggtc
7	<i>HIF1A</i>	p.Glu481Lys	ccccacagacacagaaactga	atcctgaatctggggcatgg
7	<i>VHL</i>	p.Pro25Leu	gttccatcctctaccgagcg	gcagaagatgacctggggagg
8	<i>VHL</i>	p.Pro25Leu	gttccatcctctaccgagcg	gcagaagatgacctggggagg
9	<i>VHL</i>	p.Glu52Lys	cgaagactacggaggtcgac	tcaagttgagccatacggg
10	<i>VHL</i>	p.Pro81Ser	gtacggcctgaagaagacg	gcttcagaccgtgctatcgt
11	<i>VHL</i>	p.Ile180Val	caagcccagcccatttcaag	tcccatccgttgatgtgcaa
12	<i>VHL</i>	p.Arg210Trp	gactggacatcgtcaggtcg	aatgccaccaccttctcctg
13	<i>IDH1</i>	p.Arg132His	atgtgttgagatggacgcct	atattctgggtggcacggtc
14	<i>IDH1</i>	p.Ile189Val	taactgggactagaggcgcc	gttggaaacctgtctgggact
16	<i>IDH2</i>	p.Thr435Met	tggtgaggtaaaacgcact	atggctgttctgatgcccaa
17	<i>IDH2</i>	p.Asp225Asn	agatggggtctcactgttgc	gccggcactttcaaaatggt
18	<i>KDM4C</i>	p.Tyr4Cys	cctcactccacagatggctg	ctgagcctgggatgttgagg
19	<i>KDM4C</i>	p.Arg371Gln	tccaaccggttgtgtttca	tgccatgtcgagcaacttca
19	<i>CDKN2A</i>	p.Ala121Thr	atggttactgcctctgggtgc	gtgagggggctctacacaag

**S9 Table.** Primer pairs designed for genomic DNA amplification and Sanger sequencing of candidate variants.