**Supplemental Table S1. Human gene mutation database (HGMD®) information of the detected mutations in the von Hippel-Lindau disease (*VHL*) locus of the study cohort.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Mutation CDNA | | | | | Protein change | HGMD listed | Protein change |
| TRUNCATING | | | |  | |  |  |
|  | **Deletion** | | | |  |  |  |
|  |  |  | *VHL* gene deletion | |  | Yes | e.g. CG005201 **†** |
|  |  |  | Deletion Exon 1 and 2 | |  | Yes | e.g. CG095823 **†** |
|  |  |  | Deletion Exon 2 and 3 | |  | Yes | e.g. CG025037 **†** |
|  |  |  | Deletion Exon 1 | |  | Yes | e.g. CG1611259 **†** |
|  |  |  | Deletion Exon 2 | |  | Yes | e.g. CG025036**†** |
|  |  |  | Deletion Exon 3 | |  | Yes | e.g. CG942249**†** |
|  | **Splice** | | | |  |  |  |
|  |  |  | c.464-2A > G | |  | Yes | CS961704 |
|  | **Frameshift** | | | |  |  |  |
|  |  |  | c.220del | | p.Val74Leufs\*85 | No | - |
|  |  |  | c.408del | | p.Phe136Leufs\*23 | Yes | CD114402 |
|  |  |  | c.493del | | p.Val165Leufs\*5 | Yes | CD042627 |
|  | **Nonsense** | | | |  |  |  |
|  |  |  | c.394C>T | | p.Gln132X | Yes | CM961428 |
|  |  |  | c.481C>T | | p.Arg161X | Yes | CM941381 |
|  |  |  | c.490C>T | | p.Gln164X | Yes | CM961433 |
|  |  |  | c.548C>A | | p.Ser183X | Yes | CM941388 |
|  |  |  | c.555C>A | | p.Tyr185X | Yes | CM130354 |
| SINGLE AMINO-ACID SUBSTITUTION/DELETION | | | | | |  |  |
|  | **In frame** | | | |  |  |  |
|  |  |  | c.227\_229del | | p.Phe76del | Yes | CD941805 |
|  | **Missense** | | | |  |  |  |
|  |  |  | c.233A>G | | p.Asn78Ser | Yes | CM951272 |
|  |  |  | c.235C>G | | p.Arg79Gly | No, but p.Arg79Pro | - |
|  |  |  | c.238A>C | | p.Ser80Arg | Yes | CM941367 |
|  |  |  | c.239G>T | | p.Ser80Ile | Yes | CM951273 |
|  |  |  | c.254T>C | | p.Leu85Pro | Yes | CM011823 |
|  |  |  | c.256C>G | | p.Pro86Ala | Yes | CM951276 |
|  |  |  | c.257C>A | | p.Pro86His | No, but p.Pro86Ala | - |
|  |  |  | c.262T>A | | p.Trp88Arg | Yes | CM951278 |
|  |  |  | c.266T>C | | p.Leu89Pro | Yes | CM941368 |
|  |  |  | c.269A>T | | p.Asn90Ile | Yes | CM004284 |
|  |  |  | c.292T>C | | p.Tyr98His | Yes | CM941370 |
|  |  |  | c.319C>G | | p.Arg107Gly | Yes | CM020979 |
|  |  |  | c.320G>A | | p.Arg107His | Yes | CM023996 |
|  |  |  | c.335A>G | | p.Tyr112Cys | Yes | HM080105 |
|  |  |  | c.386T>C | | p.Leu129Pro | Yes | CM109551 |
|  |  |  | c.388G>A | | p.Val130Ile | Yes | CM126148 |
|  |  |  | c.395A>C | | p.Gln132Pro | Yes | CM994242 |
|  |  |  | c.407T>C | | p.Phe136Ser | Yes | CM941376 |
|  |  |  | c.461C>T | | p.Pro154Leu | Yes | CM941378 |
|  |  |  | c.463G>C | | p.Val155Leu | Yes | CM023999 |
|  |  |  | c.475A>G | | p.Lys159Glu | Yes | CM961430 |
|  |  |  | c.486C>G | | p.Cys162Trp | Yes | CM951293 |
|  |  |  | c.491A>T | | p.Gln164Leu | No, but p.Gln164Arg and p.Gln164His | - |
|  |  |  | c.499C>T | | p.Arg167Trp | Yes | CM941384 |
|  |  |  | c.562C>G | | p.Leu188Val | Yes | CM951300 |
| UNKNOWN SIGNIFICANCE | | | | |  |  |  |
|  | **Synonymous** | | | |  |  |  |
|  |  |  | c.93G>A | | p.Glu31= | Yes | - |
| † We do not know the exact breakpoints of the exon/whole gene deletion variants and therefore could not assign specific HGMD accession numbers. Instead we provided exemplary HGMD accession numbers of deletion variants covering the same exons as our patients. | | | | | | | |