HYPOGONADOTROPIC HYPOGONADISM GENE PANEL DG 2.5/2.6

| Gene | Median | % covered | % covered | Associated phenotype description and OMIM disease ID |
|--------|----------|-----------|-----------|---|
| name | coverage | > 10x | > 20x | |
| ADCY3 | 126.2 | 99% | 98% | No OMIM phenotype |
| CHD7 | 144.8 | 100% | 98% | CHARGE syndrome, 214800 |
| | | | | Hypogonadotropic hypogonadism 5 with or without anosmia,612370 |
| | | | | Hypogonadotropic hypogonadism 5 with or without anosmia, 612370 |
| | | | | {Scoliosis, idiopathic 3}, 608765 |
| DUSP6 | 168.5 | 100% | 100% | Hypogonadotropic hypogonadism 19 with or without anosmia, 615269 |
| FGF17 | 143.6 | 100% | 100% | Hypogonadotropic hypogonadism 20 with or without anosmia, 615270 |
| FGF8 | 107.9 | 82% | 76% | Hypogonadotropic hypogonadism 6 with or without anosmia, 612702 |
| FGFR1 | 148.8 | 100% | 97% | Pfeiffer syndrome, 101600 |
| | | | | Jackson-Weiss syndrome, 123150 |
| | | | | Hypogonadotropic hypogonadism 2 with or without anosmia, 147950 |
| | | | | Osteoglophonic dysplasia, 166250 |
| | | | | Trigonocephaly 1, 190440 |
| | | | | Hartsfield syndrome, 615465 |
| FLRT3 | 245.2 | 100% | 100% | Hypogonadotropic hypogonadism 21 with or without anosmia, 615271 |
| FSHB | 147.8 | 100% | 100% | Hypogonadotropic hypogonadism 24 without anosmia,229070 |
| GNRH1 | 101.1 | 99% | 88% | Hypogonadotropic hypogonadism 12 with or without anosmia, 614841 |
| GNRHR | 206.1 | 100% | 100% | Hypogonadotropic hypogonadism 7 with or without anosmia, 138850 |
| HS6ST1 | 65.8 | 96% | 85% | {Hypogonadotropic hypogonadism 15 with or without anosmia}, 614880 |
| IL17RD | 140 | 100% | 99% | Hypogonadotropic hypogonadism 18 with or without anosmia, 615267 |
| KAL1 | 133 | 89% | 87% | Hypogonadotropic hypogonadism 1 with or without anosmia (Kallmann syndrome 1), 308700 |
| KISS1 | 40.4 | 99% | 99% | Hypogonadotropic hypogonadism 13 with or without anosmia, 614842 |
| KISS1R | 93.9 | 100% | 96% | Hypogonadotropic hypogonadism 8 with or without anosmia, 614837 |
| | | | | ?Precocious puberty,central,1,176400 |
| NROB1 | 140 | 100% | 99% | Adrenal hypoplasia, congenital, with hypogonadotropic hypogonadism,300200 |
| | | | | 46XY sex reversal 2,dosage-sensitive,300018 |
| NSMF | 109.6 | 98% | 96% | Hypogonadotropic hypogonadism 9 with or without anosmia, 614838 |
| | | | | |

| PCSK1 | 147.1 | 100% | 99% | Obesity with impaired prohormone processing,60955 {Obesity,susceptibility to,BMIQ12},612362 |
|--------|-------|------|------|--|
| PROK2 | 88 | 99% | 99% | Hypogonadotropic hypogonadism 4 with or without anosmia, 610628 |
| PROKR2 | 363.4 | 100% | 100% | Hypogonadotropic hypogonadism 3 with or without anosmia, 244200 |
| PROP1 | 81.9 | 96% | 93% | Pituitary hormone deficiency, combined, 2,262600 |
| SEMA3A | 196.1 | 100% | 100% | {Hypogonadotropic hypogonadism 16 with or without anosmia}, 614897 |
| SOX10 | 69.4 | 100% | 89% | PCWH syndrome, 609136 |
| | | | | Waardenburg syndrome, type 2E, with or without neurologic involvement, 611584 |
| | | | | Waardenburg syndrome, type 4C,613266 |
| | | | | Waardenburg syndrome, type 2E, with or without neurological involvement, 611584 |
| | | | | Waardenburg syndrome, type 4C, 613266 |
| SPRY4 | 139 | 100% | 100% | Hypogonadotropic hypogonadism 17 with or without anosmia, 615266 |
| TAC3 | 80.3 | 99% | 91% | Hypogonadotropic hypogonadism 10 with or without anosmia, 614839 |
| TACR3 | 175.2 | 100% | 100% | Hypogonadotropic hypogonadism 11 with or without anosmia, 614840 |
| WDR11 | 137.3 | 96% | 96% | Hypogonadotropic hypogonadism 14 with or without anosmia, 614858 |

Gene symbols used follow HGCN guidelines: Gray KA, Yates B, Seal RL, Wright MW, Bruford EA. Nucleic Acids Res. 2015 Jan;43(Database issue):D1079-85. Median Coverage describes the average number of reads seen across 50 exomes

Genes with Median Coverage and % Covered 10x/20x denoting NC are non-coding genes for which coverage statistics could not be generated.

OMIM release used for OMIM disease identifiers and descriptions : April 10th, 2016.

This list is accurate for panel versions DG 2.5 and DG 2.6. From DG 2.5 to DG 2.6 no changes were made to the content of the gene panels.

Ad 1. "No OMIM phenotype" signifies a gene without

[%] Covered 10x describes the percentage of a gene's coding sequence that is covered at least 10x

[%] Covered 20x describes the percentage of a gene's coding sequence that is covered at least 20x