

# Supplemental Table S1

>MON2-WT  
aaaccacagtgggctacgagctggtg**cggtgga**atcaa

>MON2-KO type1 ( $\Delta$ GC)  
aaaccacagtgggctacgagctggt**..ggtgga**atcaa

>MON2-KO type2 (+A)  
aaaccacagtgggctacgagctggtg**Acggtgga**atcaa

>VPS35-WT  
acatcagtgattcca**tgga**ttttgtactgctcaactttgcagaaatgaacaagctctgggtg**cgaa**atgcagcatcaggg  
acatagccgagatagagaaaaagagaacgagaaagacaagaactgagaatttttagtggga**caaat**ttgtg**tgcgctc**  
**agtcagttgga**aggtgtaaatgtggaacggt

>VPS35-KO type1 ( $\Delta$ 147bp)  
acatcagtgattcca**tgga**.....  
.....  
.....**gga**aggtgtaaatgtggaacggt

>DOPEY1-KO (WT)  
AAACGCCT**AGCTCAATGTCTACATCCAG**CATTACCAGGTGGAGTTCATCGGAAGGCGCTT**GAAACATATGAAATTATCT**  
TCAAAATAATTGGACCT**AAGCGACTTGCCAAAGATCTTTTT**

>DOPEY1-KO ( $\Delta$ 87bp)  
AAACGCCT**AGCT**.....  
.....**CGACTTGCCAAAGATCTTTTT**

>DOPEY2-KO (WT)  
CCTCT**CCTGGCACACGCGGCGGTGT**CGGTGAGGCCGGTGCTGCTCAC**CCTGTACGAGAAGTACTTCCTCC**ACTGCAGA

>DOPEY2-KO ( $\Delta$ 31bp)  
CCTCT**CCTGGCACACGCGGCGG**.....**CGAGAAGTACTTCCTCC**ACTGCAGA

>DOPEY1 in D-KO (WT)  
AAACGCCT**AGCTCAATGTCTACATCCAG**CATTACCAGGTGGAGTTCATCGGAAGGCGCTT**GAAACATATGAAATTATCT**  
TCAAAATAATTGGACCT**AAGCGACTTGCCAAAGATCTTTTT**

>DOPEY1-KO in D-KO type1 ( $\Delta$ 87bp)  
AAACGCCT**AGCT**.....  
.....**CGACTTGCCAAAGATCTTTTT**

>DOPEY1-KO in D-KO type2 ( $\Delta$ 88bp)  
AAACGCCT**AGC**.....  
.....**CGACTTGCCAAAGATCTTTTT**

>DOPEY2 in D-KO (WT)  
CCTCT**CCTGGCACACGCGGCGGTGT**CGGTGAGGCCGGTGCTGCTCAC**CCTGTACGAGAAGTACTTCCTCC**ACTGCAGA

>DOPEY2-KO in D-KO ( $\Delta$ 31bp)  
CCTCT**CCTGGCACACGCGGCGG**.....**CGAGAAGTACTTCCTCC**ACTGCAGA