

Supplemental Data

Ciliary Abnormalities Due to Defects

in the Retrograde Transport Protein DYNC2H1

in Short-Rib Polydactyly Syndrome

Amy E. Merrill, Barry Merriman, Claire Farrington-Rock, Natalia Camacho, Eiman T. Sebald, Vincent A. Funari, Matthew J. Schibler, Marc H. Firestein, Zachary A. Cohn, Mary Ann Priore, Alicia K. Thompson, David L. Rimoin, Stanley F. Nelson, Daniel H. Cohn, and Deborah Krakow

Table S1. Oligonucleotide sequences for PCR of DYNC2H1

DYNC2H1 Fragment	5' Forward Primer	3' Reverse Primer
Exon 1	CAAAGCTCCTCTCTTCCCTTCACTTC	TCCTGAAAAGGATCTGGTTGGTAAAG
Exon 2	AAGGAAAGAAGAGATAAATTGGTTTT	TGCATTTTATACCTTTCTCCAATTC
Exon 3	TGTTTTGGGAAGCCAATTTGATTAG	CCTATGCTCAGAGAAATTCCAAAAG
Exon 4	TGACTCAAATATTTTGCTGCTCTGC	AGGCTGTAAAAATTGAATCCCAAAG
Exon 5	GGCAATATTAGAGTTGTGGCAGTTG	TGCTACATGATTTGCTTTAAGAGTTAC
Exon 6	CATGCATGTGGTATTTCATAGATCC	TCTCACAAAATAATTTCCAGCAGATG
Exon 7/8	TTTAGACCTATTTATGCAAATGGTTGG	CTTTGCTTATAGTTGGACGCTTTACC
Exon 9	TCAGAAATTCAGACAGTCCACAGC	TCAGCATGAAAATGTCAGAAAAATG
Exon 10	TGACATAGTGCTTGGTACGTGGAAG	GACAGACATGCCAAGGAAAACAGAG
Exon 11	GAATCACAGATCAGAGAAGGGGACTC	GGAGGAGTAGCAAGTTTGGAGAAAAGG
Exon 12	ATTGTGTTTATTAGTCAAACAGTGAG	CAGCTGGCAGTGCTATTCTATGAGC
Exon 13	AATGCCCTATTGGAGATGAAAAACC	AAGTCCCTGGAAGCAAACAAAATC
Exon 14	GCAGGTCAGAGTTGGGGATAGTTG	GCAAATGGGAATTGTGATTTCTCTG
Exon 15	GGTGGTATCTGTCAGGTTTCTCCAC	TGTAAATTGATTGTTTCATATGTGGTC
Exon 16/17	TTAAATGAAAAATCCATTCTACTGC	TCTACGAATCCAGCTCTCTGCTTTG
Exon 18	TTTCTGTTTATTCTTTAGGCTGTGC	CAAGAAGCTGATGTGACTTCAATGC
Exon 19	TGTGCTTAAAGATCACCATATTACTGC	AATGATTGAATATGGACTTTTCCTG
Exon 20	TGTAAGTACTTCTACCACCCCTTG	TTACCTAATTTAAACATTTTCCATGC
Exon 21	AACAACTGTTTAAATGCAAAAATC	AAACCTGGGCTATAAAGGAATAAAAG
Exon 22	GAAAGAAAAGTATGAACCCAAAATG	AAAAGTGATGAAGTTTATGAGGAAAG
Exon 23/24	CACACATACAAGGATTGCAGTTAAG	CATAAGATGAAAGCTCCAAACATTG
Exon 25	TGTGTGTCATGGCAACATTTAATC	TTTACTTTTTGATGAAAGCTGATTCC
Exon 26	TTTTGCCTTATGGTGAAAAGC	GTAATTTGCCTGTATTAAGCACTTC
Exon 27/28	GGTGCCTGTATTCCCAGCTACTTG	TCTTTGGGTACAGGAACTGTATTTGG
Exon 29	TTTCCCTCAATAGGACATTTAAACAC	AACCAACTTTACCCTCTAAATTGAC
Exon 30	CCCCGTCTTGAAATAACAGTATAGAG	TTATCTGAGCCTCCTGGCTTCTAGG
Exon 31	GGTTCAGTATGACATTAAGATGGAG	TTCCTCGAGTAATCACCAACACAG
Exon 32	CCATTTAAATTCATGGAGAAATCAC	TTCTTATGTGACACCTTTCTAATTCTG
Exon 33	TTTAACTGTTTGTTCATTTTTATC	ACAACCTCTGTCCATTTTACATTC

Exon 34	TTGAAATCAACCTGGGTTTTGAAAG	CAGATTAGAAACACGGATGTCAGGAG
Exon 35	TGTTGGCAGCATATTTTATGTTTATAG	ATGTGCATGCTAAAGCCTTTCATAG
Exon 36	ATGATTATTTTGTGTGGTTGCTTCC	AATTGGGGCAGGGTATACAGTAATC
Exon 37	AGTAAGCTTGCCAATTCATGTGATG	GAAGACTTCCCTGAGCAAGTGAG
Exon 38	GGCAATACCTTCCACTGAAGAAATC	TGGTCATGTAGAAGTCTTGACAAAG
Exon 39	GATTGCGCATGGGTTCTTCAG	TTTTACTTAATATGAAACCAGGACAG
Exon 40	TGTGCGTAGAATAATGTTTATTGGAG	AGCAGTGACAAAATCCACCTCTCAC
Exon 41	TGAGTTTAAAAATGGTTCTTGAAAAGG	CAAATCATTGTGTTTTGGCAGTTAAG
Exon 42	TTGGAACTAAGATGATTACTTTTTGG	ACAAAAGCCATTAAATCAATTAGGG
Exon 43	GAGTATAAAATGTATTTTGTGGTTGC	CCAAATGAAGAATGAATATTTTCTAAG
Exon 44	TGAAACTTAGGCAAAAATATCCTTTATC	ATTGCCTATATTTTGAGAAGGGTAGG
Exon 45	TAGAGCAGCACAGTTTCAAACCAC	AACAGGAAAGTAAAGCCTGGGTGTC
Exon 46	CAGTTCATCTACAGGTAGAAATTGG	TGACAATCATACACAGTTTGGAAAGAAG
Exon 47	TTCCTTCTTCCATTTATCTGATGC	GACCTATAAAATCATGCTCTGGGTAAG
Exon 48	TTCTGGAGATGATCTTATTTGGATT	AAGATAAGAACCAGCTTTCCTATT
Exon 49	GCCAATATATTTATCCAGGATTACC	AAACCAAATAAAGCAAAAGAGAGTG
Exon 50	CCAAATTATGTGGCTAAAGTTTGAT	AAAAATGGAGTCTCTCAATTCTCCT
Exon 51	GGTGTTTGAATTTTATCAAATGAGG	GGTGTTACTTTCTAAAAGCTCCAGA
Exon 52	ATTGTGCTCGTTTTAAGAAACAAC	GAAGAAAACAGACATTTCCAAACAT
Exon 53	TGTCTCTTAGTCTGGAATGAATCCT	TTTGCATCAGAAGAAATCTAATTTTG
Exon 54	GGAGCTGTGAATAGTTGTCTAGGAA	AAACCTACAGGGCAATATAGGTAGG
Exon 55	CACACTTAACATGTTTGCTTGATTC	AATATAGGAAAATACCATGCCCTTC
Exon 56	TGGAAACTCTCTTGTGCATAGATTCA	GGCTTTCCTTCTTGTCTCTTTTAC
Exon 57	ACCTTGATGATTGAAAGCATTTTG	ATGAAGTGCATTTTGAAAAACAATA
Exon 58	TGGATTAAGTATTGCATACACCA	TAATGCTTCCAAGTGAATTCCTA
Exon 59	GTGCCCAAATAAAGTGTGTAAGAAT	CAACTGCCATTTTACAAATAGAGAAA
Exon 60	CTTCTAATTTTAGCGTTGCTTTTCA	CACAGCATCATCTGACATAAGAGTC
Exon 61	GTGTGTGTGGGTTTGTCTCTTCTAT	GCAAATTAATGGATCTTCTCTCCT
Exon 62	CAGCAGAGTCTGAGATCTTTTGTAT	GGTATCCTTGAACCCATATAAAAT
Exon 63	GAAGAATGGGTTTCAAGTAAGGACT	CTAACTGAATCATTGATGGGTTTTTC
Exon 64	TCTGGAGACGTAAAATAAGATGACA	TGTACTACTCGAAGCACAATGATGT
Exon 65	CATGGTTGTATATTTGTGTTCTCCA	CAGTAGGACCCAGTGTTGAATCTAT
Exon 66	TCTGAACATAAGCAGAGTAGGGTTC	ACACATATTGCTGAAGGAAGTAAGC
Exon 67	TATCTCAGGTAACCCAACCTTTTGC	ATAAAGCTCGAAAAGATTCCAAGG
Exon 68	TCATCAGATGTAATTGTTGAAGGTG	ACATAGCTCCCCTTCTTGTTAGAAT
Exon 69	AAGTTGCCATAAACATCAAATGAAT	AACTAGAATCAAACCCAATGTTCTG
Exon 70	CATCATCTTCATTTGTTTTATGTGC	TTACATGTGGTCTTTTGAACATAA
Exon 71	TAGTCCCTTGAATTTGATGGTTAAA	AATGCTATAAGGCATTCCAGTTAAA
Exon 72	TTAACGACTATGCTTTTCAAAGAC	CACAGGGAAGTAGAACTAGGAATCA
Exon 73	GAAGAAGTGGTAAGATGGAAATGAG	GAACACCTCTGAAGCAAATTATACC
Exon 74	AGAATTTTACCATGGTGACTTGTA	AACACTGATTACGAATAAGGAGCAC
Exon 75	ACAAGGCAACACAAAGTAGAAGAGT	ATTTAATTGTCAATAAGGTGGCAA
Exon 76	CCTATTGTGACAGTTTAAAGCACAG	GCCGAGAATTATTTTCTAAAACAG
Exon 77	TGAGATTACAACCTCACCTGGGTATT	CCATGGAAAATAACATATCCACAGT
Exon 78	CCAGTTAGGAAGGTTTAGGGATTAC	AATGCATGACATTTAATACTGATGT
Exon 79	CCAGAGCATTAAAGAAATACATCAGAA	TGTA AAAAGAAGTTGTGTGTTCTGT
Exon 80	TAATTTAACTCAAACCCGTAAGC	ATTTTTAGTAGAGATGGGGTTTCC
Exon 81	TACTTTTCATGCTATGGCCAGTTA	CAAGCAAATTTTGTGATAGGAAGTT

Exon 82	AAATATAACTCAAGGCAGGAATTTAG	GCCTCACTAAAGTTGAAAGAATCAA
Exon 83	TTAATGACAGAATACTTCCCACAGA	TAAATAAAGCTTGTGGGGTCTACAG
Exon 84	GGCTGAAGTTCTTTTTATTTGTTGA	CATGACTTCACAGTTAGGAACCTCT
Exon 85	GCTGACTTAATACATTTGACCGTTT	TTGGATTCTTCAGTTACATCAGTCA
Exon 86	TCATGCTGTCTCTACTGTTCAATTT	CAAAAATAACAAATGGCAGAATAATG
Exon 87	TTCTAGCTACCATTTTCAGAGCATTT	AATCAAGGGCAGTGTAATAGGAAGT
Exon 88	GCTTTGAAAATTTAGTGTGAACCTCTG	GTTGTTTCATGCCAAATCTTATTTT
Exon 89	TGGAAAGCATAGCTCTTAAGGTAGA	GGTGAGATTAGAAAGCAAACAAAAA
Exon 90	ATAGGCCATGTGTTTCATTTTGTT	AAATGTAGACTGACCACATGTTTGA