NGS698PoolA_15_368301_JB_F_CP2R207Via_Pan4150 coverage report 2025-07-14 14:06

Panel genes analyzed: BRCA1, BRCA2, BRIP1, MLH1, MSH2, MSH6, PALB2, RAD51C, RAD51D

Gene Coverage Summary:

Gene Symbol	Mean Coverage	Completeness at 30X	Exon Count
BRCA1	334.2	100.0	23
BRCA2	418.3	100.0	27
BRIP1	398.0	100.0	20
MLH1	320.7	100.0	19
MSH2	409.7	100.0	16
MSH6	327.1	100.0	10
PALB2	361.6	100.0	13
RAD51C	371.6	100.0	9
RAD51D	274.6	100.0	10

Exons with < 100% coverage @ 30x:

All exons have 100% coverage at a minimum of 30x.

Complete Exon Coverage Report

Gene Symbol	Transcript	Entrez ID	Chr	Start	Stop	Mean Coverage	Completeness
MSH2	NM_000251.2	4436	2	47630196	47630551	257.7	100.0
MSH2	NM_000251.2	4436	2	47635530	47635704	474.7	100.0
MSH2	NM_000251.2	4436	2	47637223	47637521	431.4	100.0
MSH2	NM_000251.2	4436	2	47639543	47639709	415.3	100.0
MSH2	NM_000251.2	4436	2	47641398	47641567	520.5	100.0
MSH2	NM_000251.2	4436	2	47643425	47643578	432.1	100.0
MSH2	NM_000251.2	4436	2	47656871	47657090	388.1	100.0
MSH2	NM_000251.2	4436	2	47672677	47672806	486.2	100.0
MSH2	NM_000251.2	4436	2	47690160	47690303	477.1	100.0
MSH2	NM_000251.2	4436	2	47693787	47693957	454.1	100.0
MSH2	NM_000251.2	4436	2	47698094	47698211	536.5	100.0
MSH2	NM_000251.2	4436	2	47702154	47702419	474.9	100.0
MSH2	NM_000251.2	4436	2	47703496	47703720	295.7	100.0
MSH2	NM_000251.2	4436	2	47705401	47705668	353.1	100.0
MSH2	NM_000251.2	4436	2	47707825	47708020	372.2	100.0
MSH2	NM_000251.2	4436	2	47709908	47710099	442.9	100.0
MSH6	NM_000179.2	2956	2	48010211	48010642	215.8	100.0
MSH6	NM_000179.2	2956	2	48018056	48018272	388.4	100.0
MSH6	NM_000179.2	2956	2	48023023	48023212	261.3	100.0
MSH6	NM_000179.2	2956	2	48025740	48028304	316.4	100.0
MSH6	NM_000179.2	2956	2	48030549	48030834	323.9	100.0
MSH6	NM_000179.2	2956	2	48032039	48032176	392.7	100.0
MSH6	NM_000179.2	2956	2	48032747	48032856	381.7	100.0
MSH6	NM_000179.2	2956	2	48033333	48033507	404.5	100.0
MSH6	NM_000179.2	2956	2	48033581	48033800	420.4	100.0
MSH6	NM_000179.2	2956	2	48033908	48034010	581.6	100.0
MLH1	NM_000249.3	4292	3	37034831	37035164	203.5	100.0
MLH1	NM_000249.3	4292	3	37038100	37038210	344.1	100.0
MLH1	NM_000249.3	4292	3	37042436	37042554	398.6	100.0

MLH1	NM_000249.3	4292	3	37045882	37045975	382.9	100.0
MLH1	NM_000249.3	4292	3	37048472	37048564	418.8	100.0
MLH1	NM_000249.3	4292	3	37050295	37050406	486.5	100.0
MLH1	NM_000249.3	4292	3	37053301	37053363	535.4	100.0
MLH1	NM_000249.3	4292	3	37053492	37053600	395.0	100.0
MLH1	NM_000249.3	4292	3	37055913	37056045	372.5	100.0
MLH1	NM_000249.3	4292	3	37058987	37059100	305.9	100.0
MLH1	NM_000249.3	4292	3	37061791	37061964	295.4	100.0
MLH1	NM_000249.3	4292	3	37067118	37067508	240.3	100.0
MLH1	NM_000249.3	4292	3	37070265	37070433	352.6	100.0
MLH1	NM_000249.3	4292	3	37081667	37081795	278.4	100.0
MLH1	NM_000249.3	4292	3	37083749	37083832	424.1	100.0
MLH1	NM_000249.3	4292	3	37089000	37089184	290.6	100.0
MLH1	NM_000249.3	4292	3	37089998	37090110	272.9	100.0
MLH1	NM_000249.3	4292	3	37090385	37090518	322.7	100.0
MLH1	NM_000249.3	4292	3	37091967	37092155	345.5	100.0
BRCA2	NM_000059.3	675	13	32889607	32889814	243.2	100.0
BRCA2	NM_000059.3	675	13	32890549	32890674	451.0	100.0
BRCA2	NM_000059.3	675	13	32893204	32893472	435.2	100.0
BRCA2	NM_000059.3	675	13	32899203	32899331	459.2	100.0
BRCA2	NM_000059.3	675	13	32900228	32900297	472.0	100.0
BRCA2	NM_000059.3	675	13	32900369	32900429	573.2	100.0
BRCA2	NM_000059.3	675	13	32900626	32900760	380.0	100.0
BRCA2	NM_000059.3	675	13	32903570	32903639	401.3	100.0
BRCA2	NM_000059.3	675	13	32905046	32905177	445.9	100.0
BRCA2	NM_000059.3	675	13	32906399	32907534	423.9	100.0
BRCA2	NM_000059.3	675	13	32910392	32915343	428.8	100.0
BRCA2	NM_000059.3	675	13	32918685	32918800	379.9	100.0
BRCA2	NM_000059.3	675	13	32920954	32921043	421.3	100.0
BRCA2	NM_000059.3	675	13	32928988	32929435	464.9	100.0
BRCA2	NM_000059.3	675	13	32930555	32930756	322.2	100.0
BRCA2	NM_000059.3	675	13	32931869	32932076	489.8	100.0
BRCA2	NM_000059.3	675	13	32936650	32936840	326.5	100.0

BRCAZ NM_000059.3 675 13 32937306 32937880 339.9 100.0 BRCAZ NM_000059.3 675 13 32844529 32944704 406.1 100.0 BRCAZ NM_000059.3 675 13 32845083 32945247 451.6 100.0 BRCAZ NM_000059.3 675 13 32950797 32950938 418.4 100.0 BRCAZ NM_000059.3 675 13 32954144 32954060 475.5 100.0 BRCAZ NM_000059.3 675 13 32954134 32954292 493.2 100.0 BRCAZ NM_000059.3 675 13 32971028 3297111 100.0 BRCAZ NM_000059.3 675 13 32971028 3297191 364.0 100.0 BRCAZ NM_00059.3 675 13 32971028 3297191 364.0 100.0 BRCAZ NM_0024675.3 79728 16 23614000 396.9 100.0								
BRCAZ NML_000059.3 675 13 32945083 32945247 431.6 100.0 BRCAZ NML_000059.3 675 13 32950797 32950938 418.4 100.0 BRCAZ NML_000059.3 675 13 32953877 32950962 411.1 100.0 BRCAZ NML_000059.3 675 13 32953877 32954060 475.5 100.0 BRCAZ NML_000059.3 675 13 32954344 32954060 475.5 100.0 BRCAZ NML_000059.3 675 13 32954134 32954292 493.2 100.0 BRCAZ NML_000059.3 675 13 32954134 32954292 493.2 100.0 BRCAZ NML_000059.3 675 13 32954134 32954292 493.2 100.0 BRCAZ NML_000059.3 675 13 32971025 32971191 432.4 100.0 BRCAZ NML_000059.3 675 13 32972289 32972918 364.0 100.0 DRADE NML_004675.3 79728 16 23614769 23615000 396.9 100.0 PALBZ NML_024675.3 79728 16 23625415 23625422 439.8 100.0 PALBZ NML_024675.3 79728 16 23632673 23632690 292.2 100.0 PALBZ NML_024675.3 79728 16 23634260 23634461 319.1 100.0 PALBZ NML_024675.3 79728 16 23634280 23634461 319.1 100.0 PALBZ NML_024675.3 79728 16 23635420 23634461 319.1 100.0 PALBZ NML_024675.3 79728 16 23634501 23640606 376.9 100.0 PALBZ NML_024675.3 79728 16 23640615 23640606 376.9 100.0 PALBZ NML_024675.3 79728 16 23640615 23640606 376.9 100.0 PALBZ NML_024675.3 79728 16 23640615 23640606 376.9 100.0 PALBZ NML_024675.3 79728 16 2364061 32640606 376.9 100.0 PALBZ NML_024675.3 79728 16 23649361 23649606 376.9 100.0 PALBZ NML_024675.3 79728 16 23649361	BRCA2	NM_000059.3	675	13	32937306	32937680	339.9	100.0
BRCAZ NML000059.3 675 13 32950797 32950938 418.4 100.0 BRCAZ NML000059.3 675 13 32953444 32953662 411.1 100.0 BRCAZ NML000059.3 675 13 32953877 32954060 475.5 100.0 BRCAZ NML000059.3 675 13 32954134 32954292 493.2 100.0 BRCAZ NML000059.3 675 13 32954134 32954292 493.2 100.0 BRCAZ NML000059.3 675 13 32954134 32954292 493.2 100.0 BRCAZ NML000059.3 675 13 32954105 32971191 432.4 100.0 BRCAZ NML000059.3 675 13 32971025 32971191 432.4 100.0 BRCAZ NML000059.3 675 13 32972289 32972918 364.0 100.0 DRADE NML024675.3 79728 16 23614769 23615000 396.9 100.0 DRADE NML024675.3 79728 16 23625316 23625422 439.8 100.0 DRADE NML024675.3 79728 16 23625316 23625422 439.8 100.0 DRADE NML024675.3 79728 16 23632673 23632809 292.2 100.0 DRADE NML024675.3 79728 16 23634280 2363461 319.1 100.0 DRADE NML024675.3 79728 16 23635320 23635425 419.4 100.0 DRADE NML024675.3 79728 16 23635320 23635425 419.4 100.0 DRADE NML024675.3 79728 16 23635320 23635425 419.4 100.0 DRADE NML024675.3 79728 16 23637547 23637728 370.3 100.0 DRADE NML024675.3 79728 16 23640515 23640606 378.9 100.0 DRADE NML024675.3 5892 17 3343063 33430553 349.6 100.0 DRADE NML024675	BRCA2	NM_000059.3	675	13	32944529	32944704	406.1	100.0
BRCAZ NML000059.3 675 13 32953444 32953662 411.1 100.0 BRCAZ NML000059.3 675 13 32953877 32954060 475.5 100.0 BRCAZ NML000059.3 675 13 32954134 32954292 493.2 100.0 BRCAZ NML000059.3 675 13 32958161 32969080 417.1 100.0 BRCAZ NML000059.3 675 13 32958161 32969080 417.1 100.0 BRCAZ NML000059.3 675 13 32971025 32971191 432.4 100.0 BRCAZ NML000059.3 675 13 32972289 32972918 364.0 100.0 BRCAZ NML000059.3 675 13 32972289 32972918 364.0 100.0 PALBZ NML024675.3 79728 16 23614769 23615000 396.9 100.0 PALBZ NML024675.3 79728 16 23625315 23625422 439.8 100.0 PALBZ NML024675.3 79728 16 23625315 23625422 439.8 100.0 PALBZ NML024675.3 79728 16 23632673 23632809 292.2 100.0 PALBZ NML024675.3 79728 16 23634280 2363461 319.1 100.0 PALBZ NML024675.3 79728 16 23634280 2363461 319.1 100.0 PALBZ NML024675.3 79728 16 23635320 23633425 419.4 100.0 PALBZ NML024675.3 79728 16 23635202 23633425 419.4 100.0 PALBZ NML024675.3 79728 16 23640515 23640606 378.9 100.0 PALBZ NML024675.3 79728 16 23640510 2364460 442.8 100.0 PALBZ NML024675.3 79728 16 23649161 23649283 434.6 100.0 PALBZ NML024675.3 79728 16 23649161 23649283 434.6 100.0 PALBZ NML024675.3 79728 16 23649381 23649460 442.8 100.0 PALBZ NML0246	BRCA2	NM_000059.3	675	13	32945083	32945247	431.6	100.0
BRCA2 NM_000059.3 675 13 32954877 32954080 475.5 100.0 BRCA2 NM_000059.3 675 13 32954134 32954292 493.2 100.0 BRCA2 NM_000059.3 675 13 32968816 32969080 417.1 100.0 BRCA2 NM_000059.3 675 13 32968816 32967191 432.4 100.0 BRCA2 NM_000059.3 675 13 32971225 32971191 432.4 100.0 BRCA2 NM_000059.3 675 13 32972289 32972218 364.0 100.0 PALB2 NM_024675.3 79728 16 23614769 23615000 396.9 100.0 PALB2 NM_024675.3 79728 16 2361975 23619343 356.9 100.0 PALB2 NM_024675.3 79728 16 23625315 23625422 439.8 100.0 PALB2 NM_024675.3 79728 16 23632673 23632809 292.2 100.0 PALB2 NM_024675.3 79728 16 23632673 23632809 292.2 100.0 PALB2 NM_024675.3 79728 16 23635352 23635425 419.4 100.0 PALB2 NM_024675.3 79728 16 23635542 3363542 319.1 100.0 PALB2 NM_024675.3 79728 16 23636560 376.9 100.0 PALB2 NM_024675.3 79728 16 23640606 378.9 100.0 PALB2 NM_024675.3 79728 16 23640606 372.4 100.0 PALB2 NM_024675.3 79728 16 3364960 442.8 100.0 PALB2 NM_024675.3 79728 17 3342796 33428066 278.6 100.0 PALB2 NM_024675.3 79728 17 3342796 33428066 278.6 100.0 RAD51D NM_002878.3 5892 17 3343053 3493053 349.6 100.0 RAD51D NM_002878.3 5892 17 33430563 33430573 275.5 100.0 RAD51D NM_002878.3 5892 17 33430573 33434151 235.8 100.0 RAD51D NM_002878.3 5892 17 33434361 334460 288.3 100.0 RAD51D NM_002878.3 5892 17 33434651 3344664 288.3 100.0 RAD51D NM_002878.3 5892 17 33434651 3344664 288.3 100.0 RAD51D NM_002878.3 5892 17 33434651 3344664 267.3 100.0	BRCA2	NM_000059.3	675	13	32950797	32950938	418.4	100.0
BRCA2 NM_000059.3 675 13 3295434 32954292 493.2 100.0 BRCA2 NM_000059.3 675 13 32968816 32969080 417.1 100.0 BRCA2 NM_000059.3 675 13 32971025 32971191 432.4 100.0 BRCA2 NM_000059.3 675 13 32971025 32971191 432.4 100.0 BRCA2 NM_000059.3 675 13 32972289 32972218 364.0 100.0 PALB2 NM_024675.3 79728 16 23614769 23615000 396.9 100.0 PALB2 NM_024675.3 79728 16 23625315 23625422 439.8 100.0 PALB2 NM_024675.3 79728 16 23625315 23625422 439.8 100.0 PALB2 NM_024675.3 79728 16 23632673 23632690 292.2 100.0 PALB2 NM_024675.3 79728 16 2363520 23634461 319.1 100.0 PALB2 NM_024675.3 79728 16 2363520 23635425 419.4 100.0 PALB2 NM_024675.3 79728 16 2363520 23635425 419.4 100.0 PALB2 NM_024675.3 79728 16 23636561 23646666 376.9 100.0 PALB2 NM_024675.3 79728 16 23640615 23640606 378.9 100.0 PALB2 NM_024675.3 79728 16 23640615 23640606 378.9 100.0 PALB2 NM_024675.3 79728 16 2364061 3343.6 100.0 PALB2 NM_024675.3 79728 16 2364061 334480 348.6 100.0 PALB2 NM_024675.3 79728 16 2364061 3264060 372.4 100.0 PALB2 NM_024675.3 79728 16 2364061 3264060 372.4 100.0 PALB2 NM_024675.3 79728 16 2364061 3344660 348.6 100.0 PALB2 NM_024675.3 79728 16 2364061 3344660 372.4 100.0 PALB2 NM_024675.3 79728 16 2364060 372.4 100.0 PALB2 NM_024675.3 79728 17 33427961 33428066 278.6 100.0 PALB2 NM_024675.3 79728 17 33427961 33428066 278.6 100.0 RAD51D NM_002878.3 5892 17 3343063 3343053 349.6 100.0 RAD51D NM_002878.3 5892 17 3343063 3343053 349.6 100.0 RAD51D NM_002878.3 5892 17 3343063 3343057 275.5 100.0 RAD51D NM_002878.3 5892 17 33434651 3344664 267.3 100.0	BRCA2	NM_000059.3	675	13	32953444	32953662	411.1	100.0
BRCA2 NM_000059.3 675 13 32968816 32969080 417.1 100.0 BRCA2 NM_000059.3 675 13 32971025 32971191 432.4 100.0 BRCA2 NM_000059.3 675 13 32972289 32972918 364.0 100.0 PALB2 NM_024675.3 79728 16 23614769 23615000 396.9 100.0 PALB2 NM_024675.3 79728 16 2362515 23619343 366.9 100.0 PALB2 NM_024675.3 79728 16 2362515 23625422 439.8 100.0 PALB2 NM_024675.3 79728 16 23632673 23632809 292.2 100.0 PALB2 NM_024675.3 79728 16 23632673 23632809 292.2 100.0 PALB2 NM_024675.3 79728 16 23634280 2363461 319.1 100.0 PALB2 NM_024675.3 79728 16 23635320 23635425 419.4 100.0 PALB2 NM_024675.3 79728 16 23637547 23637728 370.3 100.0 PALB2 NM_024675.3 79728 16 23640515 23640606 376.9 100.0 PALB2 NM_024675.3 79728 16 23640515 23640606 376.9 100.0 PALB2 NM_024675.3 79728 16 23640515 2364060 348.6 100.0 PALB2 NM_024675.3 79728 16 23640515 2364060 348.6 100.0 PALB2 NM_024675.3 79728 16 23649161 2364980 348.6 100.0 PALB2 NM_024675.3 79728 16 23649161 23649283 434.6 100.0 PALB2 NM_024675.3 79728 16 23649161 23649283 434.6 100.0 PALB2 NM_024675.3 79728 16 23649381 2364960 442.8 100.0 PALB2 NM_024675.3 79728 16 23649381 23649460 442.8 100.0 PALB2 NM_024675.3 79728 16 236549381 23649460 442.8 100.0 PALB2 NM_024675.3 79728 16 23649381 23649460 442.8 100.0 PALB2 NM_02678.3 5892 17 33439451 3343955 3343955 349.6 100.0 RAD51D NM_002878.3 5892 17 3343957 33434151 235.8 100.0 RAD51D NM_002878.3 5892 17 33434551 33446201 255.7 100.0	BRCA2	NM_000059.3	675	13	32953877	32954060	475.5	100.0
BRCA2 NM_000059.3 675 13 32971025 32971191 432.4 100.0 BRCA2 NM_000059.3 675 13 32972289 32972918 364.0 100.0 PALB2 NM_024675.3 79728 16 23614769 23615000 396.9 100.0 PALB2 NM_024675.3 79728 16 23619175 23619343 356.9 100.0 PALB2 NM_024675.3 79728 16 23625315 23625422 439.8 100.0 PALB2 NM_024675.3 79728 16 23632673 23632809 292.2 100.0 PALB2 NM_024675.3 79728 16 23634280 23634461 319.1 100.0 PALB2 NM_024675.3 79728 16 23634280 23634461 319.1 100.0 PALB2 NM_024675.3 79728 16 23634280 23634461 319.1 100.0 PALB2 NM_024675.3 79728 16 23637547 23637728 370.3 100.0 PALB2 NM_024675.3 79728 16 23640515 23640606 376.9 100.0 PALB2 NM_024675.3 79728 16 23640515 23640606 376.9 100.0 PALB2 NM_024675.3 79728 16 23640515 23640606 376.9 100.0 PALB2 NM_024675.3 79728 16 23640515 23640606 372.4 100.0 PALB2 NM_024675.3 79728 16 23640765 372.4 100.0 PALB2 NM_024675.3 79728 16 23649161 23649283 434.6 100.0 PALB2 NM_024675.3 79728 16 23649161 23649283 434.6 100.0 PALB2 NM_024675.3 79728 16 23649161 23649283 434.6 100.0 PALB2 NM_024675.3 79728 16 23649381 2364960 442.8 100.0 PALB2 NM_024675.3 79728 16 23649381 23649460 442.8 100.0 PALB2 NM_02878.3 5892 17 3343961 3342665 276.6 100.0 RAD51D NM_02878.3 5892 17 3343063 33430573 275.5 100.0 RAD51D NM_02878.3 5892 17 3343063 33430573 275.5 100.0 RAD51D NM_02878.3 5892 17 33434951 33434561 235.8 100.0 RAD51D NM_02878.3 5892 17 33434551 33444561 288.3 100.0 RAD51D NM_02878.3 5892 17 33446510 33446501 255.7 100.0	BRCA2	NM_000059.3	675	13	32954134	32954292	493.2	100.0
BRCA2 NM_000059.3 675 13 32972289 32972918 364.0 100.0 PALB2 NM_024675.3 79728 16 23614769 23615000 396.9 100.0 PALB2 NM_024675.3 79728 16 23619175 23619343 356.9 100.0 PALB2 NM_024675.3 79728 16 23625315 23625422 439.8 100.0 PALB2 NM_024675.3 79728 16 23632673 23632809 292.2 100.0 PALB2 NM_024675.3 79728 16 23634280 23634461 319.1 100.0 PALB2 NM_024675.3 79728 16 23634280 23634461 319.1 100.0 PALB2 NM_024675.3 79728 16 23635320 23635425 419.4 100.0 PALB2 NM_024675.3 79728 16 23637547 23637728 370.3 100.0 PALB2 NM_024675.3 79728 16 23640615 23640606 378.9 100.0 PALB2 NM_024675.3 79728 16 23640951 23641800 348.6 100.0 PALB2 NM_024675.3 79728 16 23640951 23641800 348.6 100.0 PALB2 NM_024675.3 79728 16 23649161 2364283 434.6 100.0 PALB2 NM_024675.3 79728 16 23649161 2364283 434.6 100.0 PALB2 NM_024675.3 79728 16 23649161 2364288 255.4 100.0 PALB2 NM_024675.3 79728 16 23649161 2364283 434.6 100.0 PALB2 NM_024675.3 79728 16 23649381 23649460 442.8 100.0 PALB2 NM_024675.3 79728 16 23649381 23643460 442.8 100.0 PALB2 NM_024675.3 79728 16 23649381 23643460 442.8 100.0 PALB2 NM_002878.3 5892 17 3343063 33428095 278.6 100.0 RAD51D NM_002878.3 5892 17 3343063 33430573 275.5 100.0 RAD51D NM_002878.3 5892 17 3343097 33434151 235.8 100.0 RAD51D NM_002878.3 5892 17 3343097 33434151 235.8 100.0 RAD51D NM_002878.3 5892 17 334345610 33446648 267.3 100.0 RAD51D NM_002878.3 5892 17 334345610 33446648 267.3 100.0 RAD51D NM_002878.3 5892 17 334345610 33446648 267.3 100.0 RAD51D NM_002878.3 5892 17 334345610 33446608 267.3 100.0	BRCA2	NM_000059.3	675	13	32968816	32969080	417.1	100.0
PALB2 NM_024675.3 79728 16 23614769 23615000 396.9 100.0 PALB2 NM_024675.3 79728 16 23619175 23619343 356.9 100.0 PALB2 NM_024675.3 79728 16 23625315 2362422 439.8 100.0 PALB2 NM_024675.3 79728 16 23632673 23632809 292.2 100.0 PALB2 NM_024675.3 79728 16 23634280 23634461 319.1 100.0 PALB2 NM_024675.3 79728 16 23635320 23635425 419.4 100.0 PALB2 NM_024675.3 79728 16 23637547 23637728 370.3 100.0 PALB2 NM_024675.3 79728 16 23640515 23640606 378.9 100.0 PALB2 NM_024675.3 79728 16 23640951 23641800 348.6 100.0 PALB2 NM_024675.3 79728 16 23649161	BRCA2	NM_000059.3	675	13	32971025	32971191	432.4	100.0
PALB2 NM_024675.3 79728 16 23619175 23619343 356.9 100.0 PALB2 NM_024675.3 79728 16 23625315 23625422 439.8 100.0 PALB2 NM_024675.3 79728 16 23632673 23632809 292.2 100.0 PALB2 NM_024675.3 79728 16 23634280 23634461 319.1 100.0 PALB2 NM_024675.3 79728 16 23635320 23635425 419.4 100.0 PALB2 NM_024675.3 79728 16 23640515 23640606 378.9 100.0 PALB2 NM_024675.3 79728 16 23640515 23640606 378.9 100.0 PALB2 NM_024675.3 79728 16 23640951 23641800 348.6 100.0 PALB2 NM_024675.3 79728 16 23649161 23649283 434.6 100.0 PALB2 NM_024675.3 79728 16 23649161	BRCA2	NM_000059.3	675	13	32972289	32972918	364.0	100.0
PALB2 NM_024675.3 79728 16 23625315 23625422 439.8 100.0 PALB2 NM_024675.3 79728 16 23632673 23632809 292.2 100.0 PALB2 NM_024675.3 79728 16 23634280 2363461 319.1 100.0 PALB2 NM_024675.3 79728 16 23635320 23635425 419.4 100.0 PALB2 NM_024675.3 79728 16 23637547 23637728 370.3 100.0 PALB2 NM_024675.3 79728 16 23640515 23640606 378.9 100.0 PALB2 NM_024675.3 79728 16 23640951 23641800 348.6 100.0 PALB2 NM_024675.3 79728 16 23649617 23647665 372.4 100.0 PALB2 NM_024675.3 79728 16 2364961 23649283 434.6 100.0 PALB2 NM_024675.3 79728 16 2364960 <	PALB2	NM_024675.3	79728	16	23614769	23615000	396.9	100.0
PALB2 NM_024675.3 79728 16 23632673 23632809 292.2 100.0 PALB2 NM_024675.3 79728 16 23634280 23634461 319.1 100.0 PALB2 NM_024675.3 79728 16 23635320 23635425 419.4 100.0 PALB2 NM_024675.3 79728 16 23637547 23637728 370.3 100.0 PALB2 NM_024675.3 79728 16 23640616 378.9 100.0 PALB2 NM_024675.3 79728 16 23640616 372.4 100.0 PALB2 NM_024675.3 79728 16 2364961 23649283 434.6 100.0 PALB2 NM_024675.3 79728 16 23649381 2364966 442.8 100.0 PALB2 NM_024675.3 79728 16 23652421 23652688 255.4 100.0 PALB2 NM_024675.3 79728 16 23652421 23652688 255.4 100.0 RAD51D NM_002878.3 5892 17 33428065 278.6 100.0 RAD51D NM_002878.3 5892 17 33428065 278.6 100.0 RAD51D NM_002878.3 5892 17 3343063 33428394 350.9 100.0 RAD51D NM_002878.3 5892 17 3343063 33430573 275.5 100.0 RAD51D NM_002878.3 5892 17 3343063 33430573 275.5 100.0 RAD51D NM_002878.3 5892 17 3343395 33433510 255.6 100.0 RAD51D NM_002878.3 5892 17 33433997 33434151 235.8 100.0 RAD51D NM_002878.3 5892 17 33434375 3343466 288.3 100.0 RAD51D NM_002878.3 5892 17 33434375 3343466 288.3 100.0 RAD51D NM_002878.3 5892 17 334345510 33446648 267.3 100.0	PALB2	NM_024675.3	79728	16	23619175	23619343	356.9	100.0
PALB2 NM_024675.3 79728 16 23634280 23634461 319.1 100.0 PALB2 NM_024675.3 79728 16 23635320 23635425 419.4 100.0 PALB2 NM_024675.3 79728 16 23637547 23637728 370.3 100.0 PALB2 NM_024675.3 79728 16 23640515 23640606 378.9 100.0 PALB2 NM_024675.3 79728 16 23640951 23641800 348.6 100.0 PALB2 NM_024675.3 79728 16 23649161 23649283 434.6 100.0 PALB2 NM_024675.3 79728 16 23649381 23649283 434.6 100.0 PALB2 NM_024675.3 79728 16 23649381 23649460 442.8 100.0 PALB2 NM_024675.3 79728 16 23652421 23652688 255.4 100.0 RAD51D NM_002878.3 5892 17 33427961	PALB2	NM_024675.3	79728	16	23625315	23625422	439.8	100.0
PALB2 NM_024675.3 79728 16 23637547 23637728 370.3 100.0 PALB2 NM_024675.3 79728 16 23640515 23640606 378.9 100.0 PALB2 NM_024675.3 79728 16 23640951 23641800 348.6 100.0 PALB2 NM_024675.3 79728 16 23640951 23641800 348.6 100.0 PALB2 NM_024675.3 79728 16 23640951 2364265 372.4 100.0 PALB2 NM_024675.3 79728 16 23649161 23649283 434.6 100.0 PALB2 NM_024675.3 79728 16 23649161 23649283 434.6 100.0 PALB2 NM_024675.3 79728 16 23649381 23649460 442.8 100.0 PALB2 NM_024675.3 79728 16 23649381 23649460 442.8 100.0 PALB2 NM_024675.3 79728 16 23652421 23652688 255.4 100.0 RAD51D NM_002878.3 5892 17 33427961 33428065 278.6 100.0 RAD51D NM_002878.3 5892 17 33430263 33430353 349.6 100.0 RAD51D NM_002878.3 5892 17 33430463 33430573 275.5 100.0 RAD51D NM_002878.3 5892 17 33430463 33430573 275.5 100.0 RAD51D NM_002878.3 5892 17 33433997 33434151 235.8 100.0 RAD51D NM_002878.3 5892 17 33433997 33434151 235.8 100.0 RAD51D NM_002878.3 5892 17 3343375 33434476 288.3 100.0 RAD51D NM_002878.3 5892 17 334345510 33445648 267.3 100.0 RAD51D NM_002878.3 5892 17 334345510 33445648 267.3 100.0 RAD51D NM_002878.3 5892 17 334345510 33445648 267.3 100.0	PALB2	NM_024675.3	79728	16	23632673	23632809	292.2	100.0
PALB2 NM_024675.3 79728 16 23640515 23640606 378.9 100.0 PALB2 NM_024675.3 79728 16 23640515 23640606 378.9 100.0 PALB2 NM_024675.3 79728 16 23640515 23641800 348.6 100.0 PALB2 NM_024675.3 79728 16 23646173 23647665 372.4 100.0 PALB2 NM_024675.3 79728 16 23649161 23649283 434.6 100.0 PALB2 NM_024675.3 79728 16 23649161 23649283 434.6 100.0 PALB2 NM_024675.3 79728 16 23649381 23649460 442.8 100.0 PALB2 NM_024675.3 79728 16 23652421 23652688 255.4 100.0 PALB2 NM_024675.3 79728 16 23652421 23652688 255.4 100.0 RAD51D NM_002878.3 5892 17 33428965 278.6 100.0 RAD51D NM_002878.3 5892 17 3342894 350.9 100.0 RAD51D NM_002878.3 5892 17 33430263 33430353 349.6 100.0 RAD51D NM_002878.3 5892 17 33430463 33430573 275.5 100.0 RAD51D NM_002878.3 5892 17 33433995 33433510 255.6 100.0 RAD51D NM_002878.3 5892 17 33433997 33434151 235.8 100.0 RAD51D NM_002878.3 5892 17 33435997 33434476 288.3 100.0 RAD51D NM_002878.3 5892 17 33445510 33446048 267.3 100.0 RAD51D NM_002878.3 5892 17 33445510 33446048 267.3 100.0	PALB2	NM_024675.3	79728	16	23634280	23634461	319.1	100.0
PALB2 NM_024675.3 79728 16 23640515 23640606 378.9 100.0 PALB2 NM_024675.3 79728 16 23640951 23641800 348.6 100.0 PALB2 NM_024675.3 79728 16 23646173 23647665 372.4 100.0 PALB2 NM_024675.3 79728 16 23649161 23649283 434.6 100.0 PALB2 NM_024675.3 79728 16 23649381 23649460 442.8 100.0 PALB2 NM_024675.3 79728 16 23652688 255.4 100.0 PALB2 NM_024675.3 79728 16 23652688 255.4 100.0 RAD51D NM_002878.3 5892 17 33427961 33428065 278.6 100.0 RAD51D NM_002878.3 5892 17 33430263 33430353 349.6 100.0 RAD51D NM_002878.3 5892 17 334333967 275.5 100.0	PALB2	NM_024675.3	79728	16	23635320	23635425	419.4	100.0
PALB2 NM_024675.3 79728 16 23640951 23641800 348.6 100.0 PALB2 NM_024675.3 79728 16 23646173 23647665 372.4 100.0 PALB2 NM_024675.3 79728 16 23649161 23649283 434.6 100.0 PALB2 NM_024675.3 79728 16 23649381 23649460 442.8 100.0 PALB2 NM_024675.3 79728 16 23652421 23652688 255.4 100.0 RAD51D NM_024675.3 5892 17 33427961 33428065 278.6 100.0 RAD51D NM_002878.3 5892 17 33428210 33428065 278.6 100.0 RAD51D NM_002878.3 5892 17 33430263 33430353 349.6 100.0 RAD51D NM_002878.3 5892 17 33433063 33430573 275.5 100.0 RAD51D NM_002878.3 5892 17 33433997	PALB2	NM_024675.3	79728	16	23637547	23637728	370.3	100.0
PALB2 NM_024675.3 79728 16 23646173 23647665 372.4 100.0 PALB2 NM_024675.3 79728 16 23649161 23649283 434.6 100.0 PALB2 NM_024675.3 79728 16 23649381 23649460 442.8 100.0 PALB2 NM_024675.3 79728 16 23652421 23652688 255.4 100.0 RAD51D NM_002878.3 5892 17 33428065 278.6 100.0 RAD51D NM_002878.3 5892 17 33428210 33428394 350.9 100.0 RAD51D NM_002878.3 5892 17 33430263 33430573 275.5 100.0 RAD51D NM_002878.3 5892 17 33433963 33430573 275.5 100.0 RAD51D NM_002878.3 5892 17 3343397 33434151 235.8 100.0 RAD51D NM_002878.3 5892 17 33434375 334346248	PALB2	NM_024675.3	79728	16	23640515	23640606	378.9	100.0
PALB2 NM_024675.3 79728 16 23649161 23649283 434.6 100.0 PALB2 NM_024675.3 79728 16 23649381 23649460 442.8 100.0 PALB2 NM_024675.3 79728 16 23652421 23652688 255.4 100.0 RAD61D NM_002878.3 5892 17 33427961 33428065 278.6 100.0 RAD61D NM_002878.3 5892 17 33428210 33428394 350.9 100.0 RAD61D NM_002878.3 5892 17 33430263 33430353 349.6 100.0 RAD61D NM_002878.3 5892 17 33430463 33430573 275.5 100.0 RAD51D NM_002878.3 5892 17 33433395 33433510 255.6 100.0 RAD51D NM_002878.3 5892 17 33434375 33434151 235.8 100.0 RAD51D NM_002878.3 5892 17 33445510	PALB2	NM_024675.3	79728	16	23640951	23641800	348.6	100.0
PALB2 NM_024675.3 79728 16 23649381 23649460 442.8 100.0 PALB2 NM_024675.3 79728 16 23652421 23652688 255.4 100.0 RAD51D NM_002878.3 5892 17 33427961 33428065 278.6 100.0 RAD51D NM_002878.3 5892 17 33428210 33428394 350.9 100.0 RAD51D NM_002878.3 5892 17 33430263 33430353 349.6 100.0 RAD51D NM_002878.3 5892 17 33430463 33430573 275.5 100.0 RAD51D NM_002878.3 5892 17 3343395 33433510 255.6 100.0 RAD51D NM_002878.3 5892 17 33434975 33434151 235.8 100.0 RAD51D NM_002878.3 5892 17 33445610 33445648 267.3 100.0 RAD51D NM_002878.3 5892 17 33445610	PALB2	NM_024675.3	79728	16	23646173	23647665	372.4	100.0
PALB2 NM_024675.3 79728 16 23652421 23652688 255.4 100.0 RAD51D NM_002878.3 5892 17 33427961 33428065 278.6 100.0 RAD51D NM_002878.3 5892 17 33428210 33428394 350.9 100.0 RAD51D NM_002878.3 5892 17 33430263 33430533 349.6 100.0 RAD51D NM_002878.3 5892 17 33430463 33430573 275.5 100.0 RAD51D NM_002878.3 5892 17 33433395 33433510 255.6 100.0 RAD51D NM_002878.3 5892 17 33433997 33434151 235.8 100.0 RAD51D NM_002878.3 5892 17 33434975 33434476 288.3 100.0 RAD51D NM_002878.3 5892 17 33445510 33445648 267.3 100.0 RAD51D NM_002878.3 5892 17 33446201 33446201 251.7 100.0	PALB2	NM_024675.3	79728	16	23649161	23649283	434.6	100.0
RAD51D NM_002878.3 5892 17 33427961 33428065 278.6 100.0 RAD51D NM_002878.3 5892 17 33428210 33428394 350.9 100.0 RAD51D NM_002878.3 5892 17 33430263 33430353 349.6 100.0 RAD51D NM_002878.3 5892 17 33430463 33430573 275.5 100.0 RAD51D NM_002878.3 5892 17 3343395 33433510 255.6 100.0 RAD51D NM_002878.3 5892 17 33433997 33434151 235.8 100.0 RAD51D NM_002878.3 5892 17 33434375 33434476 288.3 100.0 RAD51D NM_002878.3 5892 17 33445510 33445648 267.3 100.0 RAD51D NM_002878.3 5892 17 33446120 33446201 251.7 100.0	PALB2	NM_024675.3	79728	16	23649381	23649460	442.8	100.0
RAD51D NM_002878.3 5892 17 33428210 33428394 350.9 100.0 RAD51D NM_002878.3 5892 17 33430263 33430353 349.6 100.0 RAD51D NM_002878.3 5892 17 33430463 33430573 275.5 100.0 RAD51D NM_002878.3 5892 17 3343395 33433510 255.6 100.0 RAD51D NM_002878.3 5892 17 33433997 33434151 235.8 100.0 RAD51D NM_002878.3 5892 17 33434375 33434476 288.3 100.0 RAD51D NM_002878.3 5892 17 33445510 33445648 267.3 100.0 RAD51D NM_002878.3 5892 17 33446120 33446201 251.7 100.0	PALB2	NM_024675.3	79728	16	23652421	23652688	255.4	100.0
RAD51D NM_002878.3 5892 17 33430263 33430353 349.6 100.0 RAD51D NM_002878.3 5892 17 33430463 33430573 275.5 100.0 RAD51D NM_002878.3 5892 17 33433395 33433510 255.6 100.0 RAD51D NM_002878.3 5892 17 33433997 33434151 235.8 100.0 RAD51D NM_002878.3 5892 17 33434375 33434476 288.3 100.0 RAD51D NM_002878.3 5892 17 33445510 33445648 267.3 100.0 RAD51D NM_002878.3 5892 17 33446120 33446201 251.7 100.0	RAD51D	NM_002878.3	5892	17	33427961	33428065	278.6	100.0
RAD51D NM_002878.3 5892 17 33430463 33430573 275.5 100.0 RAD51D NM_002878.3 5892 17 33433395 33433510 255.6 100.0 RAD51D NM_002878.3 5892 17 33433997 33434151 235.8 100.0 RAD51D NM_002878.3 5892 17 33434375 33434476 288.3 100.0 RAD51D NM_002878.3 5892 17 33445510 33445648 267.3 100.0 RAD51D NM_002878.3 5892 17 33446120 33446201 251.7 100.0	RAD51D	NM_002878.3	5892	17	33428210	33428394	350.9	100.0
RAD51D NM_002878.3 5892 17 33433395 33433510 255.6 100.0 RAD51D NM_002878.3 5892 17 33433997 33434151 235.8 100.0 RAD51D NM_002878.3 5892 17 33434375 33434476 288.3 100.0 RAD51D NM_002878.3 5892 17 33445510 33445648 267.3 100.0 RAD51D NM_002878.3 5892 17 33446120 33446201 251.7 100.0	RAD51D	NM_002878.3	5892	17	33430263	33430353	349.6	100.0
RAD51D NM_002878.3 5892 17 33433997 33434151 235.8 100.0 RAD51D NM_002878.3 5892 17 33434375 33434476 288.3 100.0 RAD51D NM_002878.3 5892 17 33445510 33445648 267.3 100.0 RAD51D NM_002878.3 5892 17 33446120 33446201 251.7 100.0	RAD51D	NM_002878.3	5892	17	33430463	33430573	275.5	100.0
RAD51D NM_002878.3 5892 17 33434375 33434476 288.3 100.0 RAD51D NM_002878.3 5892 17 33445510 33445648 267.3 100.0 RAD51D NM_002878.3 5892 17 33446120 33446201 251.7 100.0	RAD51D	NM_002878.3	5892	17	33433395	33433510	255.6	100.0
RAD51D NM_002878.3 5892 17 33445510 33445648 267.3 100.0 RAD51D NM_002878.3 5892 17 33446120 33446201 251.7 100.0	RAD51D	NM_002878.3	5892	17	33433997	33434151	235.8	100.0
RAD51D NM_002878.3 5892 17 33446120 33446201 251.7 100.0	RAD51D	NM_002878.3	5892	17	33434375	33434476	288.3	100.0
	RAD51D	NM_002878.3	5892	17	33445510	33445648	267.3	100.0
DADE4D NH 000070 0 5000 47 0044074 0044070	RAD51D	NM_002878.3	5892	17	33446120	33446201	251.7	100.0
RAD51D NM_002878.3 5892 17 33446541 33446898 241.8 100.0	RAD51D	NM_002878.3	5892	17	33446541	33446898	241.8	100.0

BRCA1	NM_007294.3	672	17	41197684	41197829	249.6	100.0
BRCA1	NM_007294.3	672	17	41199650	41199730	339.6	100.0
BRCA1	NM_007294.3	672	17	41201128	41201221	263.9	100.0
BRCA1	NM_007294.3	672	17	41203070	41203144	337.0	100.0
BRCA1	NM_007294.3	672	17	41209059	41209162	259.2	100.0
BRCA1	NM_007294.3	672	17	41215340	41215400	290.3	100.0
BRCA1	NM_007294.3	672	17	41215881	41215978	381.6	100.0
BRCA1	NM_007294.3	672	17	41219615	41219722	310.1	100.0
BRCA1	NM_007294.3	672	17	41222935	41223265	296.5	100.0
BRCA1	NM_007294.3	672	17	41226338	41226548	328.4	100.0
BRCA1	NM_007294.3	672	17	41228495	41228641	454.6	100.0
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BRCA1	NM_007294.3	672	17	41242951	41243059	307.7	100.0
BRCA1	NM_007294.3	672	17	41243442	41246887	336.0	100.0
BRCA1	NM_007294.3	672	17	41247853	41247949	295.8	100.0
BRCA1	NM_007294.3	672	17	41249251	41249316	431.4	100.0
BRCA1	NM_007294.3	672	17	41251782	41251907	331.2	100.0
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BRCA1	NM_007294.3	672	17	41256875	41256983	332.5	100.0
BRCA1	NM_007294.3	672	17	41258463	41258560	424.3	100.0
BRCA1	NM_007294.3	672	17	41267733	41267806	384.8	100.0
BRCA1	NM_007294.3	672	17	41276024	41276142	442.3	100.0
BRCA1	NM_007294.3	672	17	41277278	41277510	231.8	100.0
RAD51C	NM_058216.2	5889	17	56769924	56770159	238.5	100.0
RAD51C	NM_058216.2	5889	17	56772282	56772560	365.3	100.0
RAD51C	NM_058216.2	5889	17	56774044	56774230	379.2	100.0
RAD51C	NM_058216.2	5889	17	56780547	56780700	485.7	100.0
RAD51C	NM_058216.2	5889	17	56787210	56787361	450.6	100.0
RAD51C	NM_058216.2	5889	17	56798097	56798183	396.5	100.0
RAD51C	NM_058216.2	5889	17	56801391	56801471	374.5	100.0
RAD51C	NM_058216.2	5889	17	56809835	56809915	428.6	100.0
RAD51C	NM_058216.2	5889	17	56811469	56811594	333.2	100.0
BRIP1	NM_032043.2	83990	17	59760646	59761511	397.1	100.0

BRIP1	NM_032043.2	83990	17	59763187	59763536	379.3	100.0
BRIP1	NM_032043.2	83990	17	59770781	59770883	420.6	100.0
BRIP1	NM_032043.2	83990	17	59793302	59793434	398.4	100.0
BRIP1	NM_032043.2	83990	17	59820364	59820505	455.7	100.0
BRIP1	NM_032043.2	83990	17	59821783	59821962	412.8	100.0
BRIP1	NM_032043.2	83990	17	59853752	59853933	414.8	100.0
BRIP1	NM_032043.2	83990	17	59857612	59857772	401.3	100.0
BRIP1	NM 032043.2	83990	17	59858191	59858376	436.0	100.0
BRIP1	NM 032043.2	83990	17	59861621	59861795	465.5	100.0
BRIP1	NM 032043.2	83990	17	59870948	59871100	464.6	100.0
BRIP1	NM 032043.2	83990	17	59876451	59876670	347.6	100.0
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BRIP1	NM_032043.2	83990	17	59878604	59878845	388.1	100.0
BRIP1	NM_032043.2	83990	17	59885818	59886128	341.7	100.0
BRIP1	NM_032043.2	83990	17	59924452	59924591	506.2	100.0
BRIP1	NM_032043.2	83990	17	59926480	59926627	436.7	100.0
BRIP1	NM_032043.2	83990	17	59934409	59934602	379.1	100.0
BRIP1	NM_032043.2	83990	17	59937147	59937278	405.5	100.0
BRIP1	NM_032043.2	83990	17	59938798	59938940	469.6	100.0
BRIP1	NM_032043.2	83990	17	59940635	59940930	275.9	100.0