

Fig. 2a

	Days after doxIAA treatment			
	0	3	6	8
Exp. 1	90.94	31.25	22.27	8.81
Exp. 2	81.83	32.80	11.89	9.71
Exp. 3	82.51	30.00	34.83	11.74
Exp. 4	81.69			
Exp. 5	81.62			
Exp. 6	81.60			

Fig. 2b

	Days after doxIAA treatment				
	0	1	2	4	6
Exp. 1	7.36	5.47	22.46	23.56	16.87
Exp. 2	3.64	6.23	22.87	21.28	23.74
Exp. 3	6.04	4.04	24.39	21.12	20.35

Fig. 2c

	Total Filmed	Total Errors	Misaligned	Lagging
Exp. 1	176	67	78	18
Exp. 2	225	120	108	12
Exp. 3	278	173	154	19

Fig. 2g

	Y chr. positive	Y chr. negative	N#
Exp. 1	159	217	416
Exp. 2	79	62	141
Exp. 3	104	89	193

Fig. 3b

	Days after doxIAA treatment					
	0	1	2	4	5	
Exp. 1	0.00	2.70	7.69	27.03	16.13	26.13
Exp. 2	3.03	0.00	3.23	21.88	29.03	19.35
Exp. 3	3.94	0.00	0.00	23.53	25.81	33.33

Fig. 3c

	8d DoxIAA		3d DoxIAA	
	Intact	Fragmented	Intact	Fragmented
Exp. 1	99.20	0.80	75.00	25.00
Exp. 2	100.00	0.00	81.37	18.61
Exp. 3	100.00	0.00	85.98	14.02

Fig. 3d

	8d DoxIAA					3d DoxIAA							
	0	1	2	3	4	5	0	1	2	3	4	5	
Exp. 1	0.80	0.00	5.60	0.00	0.00	1.60	0.00	21.30	28.70	33.33	8.33	8.33	0.00
Exp. 2	0.00	95.15	4.85	0.00	0.00	0.00	15.69	45.10	25.49	6.86	5.88	0.98	0.00
Exp. 3	0.00	92.86	6.12	1.02	0.00	0.00	13.08	55.14	29.56	6.54	4.67	0.00	0.00

Fig. 3e

	Non-fragmented spreads					Fragmented spreads						
	0	1	2	3	4	5	0	1	2	3	4	5
Exp. 1	0.00	38.60	62.50	11.25	0.00	0.00	81.48	11.11	7.41	0.00	0.00	0.00
Exp. 2	0.00	53.66	30.49	8.54	6.10	1.22	80.00	10.00	5.00	0.00	5.00	0.00
Exp. 3	0.00	63.33	23.33	7.78	5.56	0.00	80.00	13.33	6.67	0.00	0.00	0.00

Fig. 3h

	Time after calyculin A addition (mins)				
	0	15	30	45	60
Exp. 1	2.94	3.69	22.22	43.45	82.73
n#	136	137	171	206	139

Fig. 3i

	8d DoxIAA		3d DoxIAA			
	SPICE	GG	GG1	GG2		
Exp. 1	5.33	0.00	2.17	31.58	4.55	13.43
Exp. 2	4.23	2.33	1.52	18.52	11.90	16.67
Exp. 3	3.77	8.61	2.13	14.68	2.22	10.64
Exp. 4	0.00	0.00	1.41	9.43	0.00	11.11

Fig. 4e

	Control	LIQ4	DNA-PK	BRCAs	RAD51	LIQ3	PARP1
Exp. 1	23.53	41.94	62.50	30.50	20.00	20.00	22.22
Exp. 2	15.63	33.33	36.67	26.67	23.33	16.67	3.57
Exp. 3	16.67	40.00	30.00	15.63	16.67	10.00	21.43

Fig. 4f

	Mock	Control	LIQ4	DNA-PK	LIQ3
Exp. 1	100.00	98.11	703.16	88.74	6.18

Fig. 4g

	8d DoxIAA			3d DoxIAA		
	Control	LIQ4	DNA-PK	Control	LIQ4	DNA-PK
Exp. 1	0.00	0.00	0.00	16.67	13.33	14.71
Exp. 2	0.00	0.00	0.00	16.13	16.13	2.94
Exp. 3	6.25	0.00	0.00	15.15	14.29	20.69

Fig. 4h

	DMSO	LIQ4	DNA-PK	RAD51
Exp. 1	23.33	45.16	25.80	26.67
Exp. 2	25.81	36.67	20.03	16.13
Exp. 3	15.15	40.00	25.81	16.13
Exp. 4	16.67		35.71	

Fig. 8a. Total sequencing pairs

	Chr. 1	Chr. 2	Chr. 3	Chr. 4	Chr. 5	Chr. 6	Chr. 7	Chr. 8	Chr. 9	Chr. 10	Chr. 11	Chr. 12	Chr. 13	Chr. 14	Chr. 15	Chr. 16	Chr. 17	Chr. 18	Chr. 19	Chr. 20	Chr. 21	Chr. 22	Chr. X	Chr. Y	TOTAL
Genomic - Replicate 1	348438	3741964	286770	2676878	2863452	2418552	2120611	2072460	1959200	2001769	1935535	1907777	1920900	1124740	1039198	1030881	1088608	672419	877005	470918	445413	1022816	69796	6046139	
Genomic - Replicate 2	432758	4287618	3296716	2966551	2966551	2717658	2601988	1921433	3004851	2268930	2254778	1719711	1516108	1381100	1407723	1400788	1040369	1000461	1150008	557003	607584	1167028	71677	4775957	
Genomic - Replicate 3	276598	276598	2061152	1838337	1837203	1723303	1586475	1519155	1220787	1920779	1674892	1430458	742455	960797	876239	914873	840384	788951	711088	733323	354039	432897	737612	45762	6038846
Genomic - Replicate 4	303712	303712	2026543	1828512	1828512	1728512	1550555	1926496	1926496	1607781	1587013	1300166	1007978	854198	829112	651458	792979	1414009	543134	427424	338388	2169862	1051399	4008918	
Microarray - Replicate 1	281033	2568995	2654602	2383089	1745400	2144625	1740727	1396799	1574114	1868208	1939976	1384128	770744	891401	800239	854993	868552	700841	475142	571848	465112	369024	1862698	1587562	8313446
Microarray - Replicate 2	357319	3297973	353025	3133170	2295977	312965	250613	1810179	2246495	2617054	1778066	1828318	6103385	1423771	1047783	1168645	833508	801878	695154	742943	689746	659780	659780	2431735	4458718

Fig. 8b. Discrepant sequencing pairs (reads)

	Chr. 1	Chr. 2	Chr. 3	Chr. 4	Chr. 5	Chr. 6	Chr. 7	Chr. 8	Chr. 9	Chr. 10	Chr. 11	Chr. 12	Chr. 13	Chr. 14	Chr. 15	Chr. 16	Chr. 17	Chr. 18	Chr. 19	Chr. 20	Chr. 21	Chr. 22	Chr. X	Chr. Y	TOTAL
Genomic - Replicate 1	646	709	331	331	346	203	236	196	146	300	184	205	69	68	103	73	71	46	90	12	12	42	1	465	
Genomic - Replicate 2	5437	5437	2413	2413	248	2062	1814	2082	1814	2042	1496	305	627	581	660	455	325	398	114	140	369	14	140	369	
Genomic - Replicate 3	4105	3889	2249	1886	1886	1601	1611	1180	818	2041	1149	1044	269	572	432	478	465	354	277	310	64	112	275	3	26717
Genomic - Replicate 4	3687	3687	1648	1648	1006	1116	818	973	704	918	584	585	214	390	191	192	174	86	174	86	52	14	1846	129	
Microarray - Replicate 1	1923	1979	1779	1522	875	1333	878	624	702	1042	545	623	185	276	235	283	202	182	05	126	79	52	873	468	16548
Microarray - Replicate 2	3681	3107	3570	2764	1655	2692	1033	1033	1437	1048	953	981	338	430	364	434	208	283	125	159	154	108	885	1140	30310

Fig. 8c. Discrepant sequencing pairs (reads)

	Chr. 1	Chr. 2	Chr. 3	Chr. 4	Chr. 5	Chr. 6	Chr. 7	Chr. 8	Chr. 9	Chr. 10	Chr. 11	Chr. 12	Chr. 13	Chr. 14	Chr. 15	Chr. 16	Chr. 17	Chr. 18	Chr. 19	Chr. 20	Chr. 21	Chr. 22	Chr. X	Chr. Y	TOTAL
Genomic - Replicate 1	646	709	331	331	346	203	236	196	146	300	184	205	69	68	103	73	71	46	90	12	12	42	1	465	
Genomic - Replicate 2	5437	5437	2413	2413	248	2062	1814	2082	1814	2042	1496	305	627	581	660	455	325	398	114	140	369	14	140	369	
Genomic - Replicate 3	4105	3889	2249	1886	1886	1601	1611	1180	818	2041	1149	1044	269	572	432	478	465	354	277	310	64	112	275	3	26717
Genomic - Replicate 4	3687	3687	1648	1648	1006	1116	818	973	704	918	584	585	214	390	191	192	174	86	174	86	52	14	1846	129	
Microarray - Replicate 1	1923	1979	1779	1522	875	1333	878	624	702	1042	545	623	185	276	235	283	202	182	05	126	79	52	873	468	16548
Microarray - Replicate 2	3681	3107	3570	2764	1655	2692	1033	1033	1437	1048	953	981	338	430	364	434	208	283	125	159	154	108	885	1140	30310

Fig. 8d. Discrepant sequencing pairs (reads)

	Chr. 1	Chr. 2	Chr. 3	Chr. 4	Chr. 5	Chr. 6	Chr. 7	Chr. 8	Chr. 9	Chr. 10	Chr. 11	Chr. 12	Chr. 13	Chr. 14	Chr. 15	Chr. 16	Chr. 17	Chr. 18	Chr. 19	Chr. 20	Chr. 21	Chr. 22	Chr. X	Chr. Y	TOTAL
Genomic - Replicate 1	646	709	331	331	346	203	236	196	146	300	184	205	69	68	103	73	71	46	90	12	12	42	1	465	
Genomic - Replicate 2	5437	5437	2413	2413	248	2062	1814	2082	1814	2042	1496	305	627	581	660	455	325	398	114	140	369	14	140	369	
Genomic - Replicate 3	4105	3889	2249	1886	1886	1601	1611	1180	818	2041	1149	1044	269	572	432	478	465	354	277	310	64	112	275	3	26717
Genomic - Replicate 4	3687	3687	1648	1648	1006	1116	818	973	704	918	584	585	214	390	191	192	174	86	174	86	52	14	1846	129	
Microarray - Replicate 1	1923	1979	1779	1522	875	1333	878	624	702	1042	545	623	185	276	235	283	202	182	05	126	79	52	873	468	16548
Microarray - Replicate 2	3681	3107	3570	2764	1655	2692	1033	1033	1437	1048	953	981	338	430	364	434	208	283	125	159	154	108	885	1140	30310

Fig. 8e. Discrepant sequencing pairs (reads)

	Chr. 1	Chr. 2	Chr. 3	Chr. 4	Chr. 5	Chr. 6	Chr. 7	Chr. 8	Chr. 9	Chr. 10	Chr. 11	Chr. 12	Chr. 13	Chr. 14	Chr. 15	Chr. 16	Chr. 17	Chr. 18	Chr. 19	Chr. 20	Chr. 21	Chr. 22	Chr. X	Chr. Y	TOTAL
Genomic - Replicate 1	646	709	331	331	346	203	236	196	146	300	184	205	69	68	103	73	71	46	90	12	12	42	1	465	
Genomic - Replicate 2	5437	5437	2413	2413	248	2062	1814	2082	1814	2042	1496	305	627	581	660	455	325	398	114	140	369	14	140	369	
Genomic - Replicate 3	4105	3889	2249	1886	1886	1601	1611	1180	818	2041	1149	1044	269	572	432	478	465	354	277	310	64	112	275	3	26717
Genomic - Replicate 4	3687	3687	1648	1648	1006	1116	818	973	704	918	584	585	214	390	191	192	174	86	174	86	52	14	1846	129	
Microarray - Replicate 1	1923	1979	1779	1522	875	1333	878	624	702	1042	545	623	185	276	235	283	202	182	05	126	79	52	873	468	16548
Microarray - Replicate 2	3681	3107	3570	2764	1655	2692	1033	1033	1437	1048	953	981	338	430	364	434	208	283	125	159	154	108	885	1140	30310

Fig. 8f. Discrepant sequencing pairs (reads)

	Chr. 1	Chr. 2	Chr. 3	Chr. 4	Chr. 5	Chr. 6	Chr. 7	Chr. 8	Chr. 9	Chr. 10	Chr. 11	Chr. 12	Chr. 13	Chr. 14	Chr. 15	Chr. 16	Chr. 17	Chr. 18	Chr. 19	Chr. 20	Chr. 21	Chr. 22	Chr. X	Chr. Y	TOTAL
Genomic - Replicate 1	646	709	331	331	346	203	236	196	146	300	184	205	69	68	103	73	71	46	90	12	12	42	1	465	
Genomic - Replicate 2	5437	5437	2413	2413	248	2062	1814	2082	1814	2042	1496	305	627	581	660	455	325	398	114	140	369	14	140	369	
Genomic - Replicate 3	4105	3889	2249	1886	1886	1601	1611	1180	818	2041	1149	1044	269	572	432	478	465	354	277	310	64	112	275	3	26717
Genomic - Replicate 4	3687	3687	1648	1648	1006	1116	818	973	704	918	584	585	214	390	191	192	174	86	174	86	52	14	1846	129	
Microarray - Replicate 1	1923	1979	1779	1522	875	1333	878	624	702	1042	545	623	185	276	235	283	202	182	05	126	79	52	873	468	16548
Microarray - Replicate 2	3681	3107	3570	2764	1655	2692	1033	1033	1437	1048	953	981	338	430	364	434	208	283	125	159	154	108	885	1140	30310

Fig. 8g. Discrepant sequencing pairs (reads)

	Chr. 1	Chr. 2	Chr. 3	Chr. 4	Chr. 5	Chr. 6	Chr. 7	Chr. 8	Chr. 9	Chr. 10	Chr. 11	Chr. 12	Chr. 13	Chr. 14	Chr. 15	Chr. 16	Chr. 17	Chr. 18	Chr. 19	Chr. 20	Chr. 21	Chr. 22	Chr. X	Chr. Y	TOTAL
Genomic - Replicate 1	646	709	331	331	346	203	236	196	146	300	184	205	69	68	103	73	71	46	90	12	12	42	1	465	
Genomic - Replicate 2	5437	5437	2413	2413	248	2062	1814	2082	1814	2042	1496	305	627	581	660	455	325	398	114	140	369	14	140	369	
Genomic - Replicate 3	4105	3889	2249	1886	1886	1601	1611	1180	818	2041	1149	1044	269	572	432										