

Recruitment Kinetics of XRCC1 and RNF8 Following MeV Proton and α -Particle Micro-Irradiation

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Supplementary Data

Table S1. GFP-XRCC1 kinetics after proton and α -particle micro-irradiations. The variations of T₂ parameter allowed to separate the cells behavior in two main groups: in the first one ^(a) the fluorescence intensity decreases after reaching the maximum value; in the second one ^(b) the fluorescence intensity does not decrease. The recruitment time is not influenced by these variations.

Ion	Ions per Point/ Nucleus	Dose (Gy)	Number of Cells Analyzed	Intensity of Fluorescence \pm SD	Mean Recruitment Time (s) \pm SD	Mean Decay Time (s) \pm SD
3 MeV α	10	1	8	0.4 \pm 0.3	117 \pm 93	3102 \pm 179 ^(a)
3 MeV α	10	1	8	0.3 \pm 0.01	307 \pm 187	1.0E+05 \pm 9.7E+04 ^(b)
3 MeV α	50	5	36	1.5 \pm 0.4	259 \pm 127	3678 \pm 1819
3 MeV α	100	10	29	1.5 \pm 0.7	160 \pm 29	4200 \pm 2507
3 MeV α	1000	100	34	3.8 \pm 1.4	34 \pm 14	5343 \pm 2155
3 MeV H+	100	1	28	0.4 \pm 0.2	233 \pm 83	5336 \pm 7639 ^(a)
3 MeV H+	100	1	18	0.5 \pm 0.3	315 \pm 113	1.7E+05 \pm 5.2E+05 ^(b)
3 MeV H+	500	5	28	1.9 \pm 1.1	221 \pm 142	1697 \pm 2300 ^(a)
3 MeV H+	500	5	10	1.2 \pm 0.5	210 \pm 51	2.0E+05 \pm 2.9E+05 ^(b)
3 MeV H+	1000	10	25	2.4 \pm 0.7	138 \pm 44	11120 \pm 28607

Table S2. GFP-RNF8 kinetics after proton and α -particle irradiations.

Ion	Ions per Point/Nucleus	Dose (Gy)	Number of Cells Analyzed	Mean Recruitment Time (s) \pm SD
3 MeV α	1	0.1	28	452 \pm 210
3 MeV α	10	1	27	524 \pm 254
3 MeV α	100	10	26	223 \pm 105
3 MeV H+	100	1	31	755 \pm 445
3 MeV H+	1000	10	16	937 \pm 425