

Supplementary Data 2: List of gene sets significantly enriched in wild type MEFs compared to *E2f1*^{3KR/3KR} after DNA damage. False Discovery Rate (FDR), q value ≤ 0.05.

#	NAME	FDR q-value
1	CELL_CELL_ADHESION_VIA_PLASMA_MEMBRANE_ADHESION_MOLECULES(5)	0.001
2	CELL_CELL_ADHESION(4)	0.000
3	NEUROTRANSMITTER_TRANSPORT(4)	0.001
4	GLIAL_CELL_DIFFERENTIATION(6)	0.001
5	POSITIVE_REGULATION_OF_NEURON_DIFFERENTIATION(5)	0.002
6	NEUROTRANSMITTER_SECRETION(5)	0.002
7	POSITIVE_REGULATION_OF_NEURON_PROJECTION_DEVELOPMENT(5)	0.001
8	GLIOGENESIS(7)	0.001
9	POSITIVE_REGULATION_OF_NERVOUS_SYSTEM_DEVELOPMENT(4)	0.002
10	HOMOPHILIC_CELL_ADHESION_VIA_PLASMA_MEMBRANE_ADHESION_MOLECULES(6)	0.002
11	REGULATION_OF_NEUROTRANSMITTER_LEVELS(4)	0.002
12	REGULATION_OF_AXON_EXTENSION(5)	0.002
13	AUTONOMIC_NERVOUS_SYSTEM_DEVELOPMENT(5)	0.002
14	REGULATION_OF_EXTENT_OF_CELL_GROWTH(5)	0.002
15	ADULT_LOCOMOTORY_BEHAVIOR(4)	0.003
16	REGULATION_OF_POSTSYNAPTIC_MEMBRANE_POTENTIAL(4)	0.004
17	REGULATION_OF_MEMBRANE_POTENTIAL(4)	0.004
18	OLIGODENDROCYTE_DIFFERENTIATION(6)	0.005
19	REGULATION_OF_NEUROBLAST_PROLIFERATION(6)	0.005
20	POSITIVE_REGULATION_OF_AXONOGENESIS(5)	0.005
21	BLOOD_VESSEL_REMODELING(5)	0.005
22	POSITIVE_REGULATION_OF_CELL_MORPHOGENESIS_INVOLVED_IN_DIFFERENTIATION(4)	0.005
23	POSITIVE_REGULATION_OF_NEUROGENESIS(5)	0.005
24	AXON_DEVELOPMENT(6)	0.005
25	POSITIVE_REGULATION_OF_NEUROBLAST_PROLIFERATION(6)	0.005
26	HETEROPHILIC_CELL_CELL_ADHESION_VIA_PLASMA_MEMBRANE_CELL_ADHESION_MOLECULES(6)	0.006
27	LOCOMOTORY_BEHAVIOR(3)	0.007
28	REGULATION_OF_CELL_SIZE(5)	0.007
29	REGULATION_OF_AXONOGENESIS(6)	0.006
30	POSITIVE_REGULATION_OF_NEURAL_PRECURSOR_CELL_PROLIFERATION(5)	0.006
31	POSITIVE_REGULATION_OF_CELL_PROJECTION_ORGANIZATION(4)	0.007
32	POSITIVE_REGULATION_OF_AXON_EXTENSION(5)	0.006
33	REGULATION_OF_NEURON_PROJECTION_DEVELOPMENT(5)	0.008
34	REGULATION_OF_NEURAL_PRECURSOR_CELL_PROLIFERATION(5)	0.009
35	NEURON_PROJECTION_DEVELOPMENT(5)	0.010
36	REGULATION_OF_NEURON_DIFFERENTIATION(7)	0.011
37	INTERMEDIATE_FILAMENT_CYTOSKELETON_ORGANIZATION(5)	0.011
38	INTERMEDIATE_FILAMENT_BASED_PROCESS(4)	0.011
39	AXONOGENESIS(7)	0.011
40	LENS_MORPHOGENESIS_IN_CAMERA_TYPE_EYE(4)	0.010
41	BEHAVIORAL_DEFENSE_RESPONSE(3)&BEHAVIORAL_FEAR_RESPONSE(4)	0.011
42	REGULATION_OF_EXCITATORY_POSTSYNAPTIC_MEMBRANE_POTENTIAL(5)	0.011
43	REGULATION_OF_CELL_PROJECTION_ORGANIZATION(4)	0.012
44	SODIUM_ION_TRANSMEMBRANE_TRANSPORT(6)	0.012
45	REGULATION_OF_NERVOUS_SYSTEM_DEVELOPMENT(5)	0.015
46	DEVELOPMENTAL_CELL_GROWTH(4)	0.016
47	REGULATION_OF_NEUROGENESIS(6)	0.016

48	NEURON_NEURON_SYNAPTIC_TRANSMISSION(4)	0.017
49	POSITIVE_REGULATION_OF_CELL_DEVELOPMENT(5)	0.018
50	NEURON_PROJECTION_MORPHOGENESIS(6)	0.019
51	AXON_EXTENSION(6)	0.021
52	REGULATION_OF_CELL_MORPHOGENESIS_INVOLVED_IN_DIFFERENTIATION(5)	0.021
53	NEURON_MATURATION(6)	0.022
54	MULTICELLULAR_ORGANISMAL_SIGNALING(4)	0.026
55	DEVELOPMENTAL_MATURATION(4)	0.026
56	BLOOD_CIRCULATION(6)	0.028
57	REGULATION_OF_CELL_DEVELOPMENT(5)	0.029
58	PARASYMPATHETIC_NERVOUS_SYSTEM_DEVELOPMENT(5)	0.029
59	SYNAPSE_ORGANIZATION(4)	0.028
60	CELL_MORPHOGENESIS_INVOLVED_IN_NEURON_DIFFERENTIATION(6)	0.029
61	REGULATION_OF_CELL_MORPHOGENESIS(4)	0.028
62	NEUROBLAST_PROLIFERATION(5)	0.030
63	CELL_PART_MORPHOGENESIS(5)	0.030
64	CELL_PROJECTION_MORPHOGENESIS(5)	0.030
65	NEUROLOGICAL_SYSTEM_PROCESS(5)	0.030
66	SCHWANN_CELL_DIFFERENTIATION(6)	0.034
67	NERVE_DEVELOPMENT(4)	0.034
68	CELL_MATURATION(5)	0.035
69	EPITHELIAL_TUBE_BRANCHING_INVOLVED_IN_LUNG_MORPHOGENESIS(6)	0.040
70	NEURON_PROJECTION_EXTENSION(5)	0.040
71	SENSORY_PERCEPTION(6)	0.041
72	NEURAL_CRESCENT_CELL_DEVELOPMENT(7)	0.042
73	NEGATIVE_REGULATION_OF_CELL_DEVELOPMENT(5)	0.041
74	REGULATION_OF_NEURON_DEATH(5)	0.041
75	LENS_DEVELOPMENT_IN_CAMERA_TYPE_EYE(4)	0.045
76	FILOPODIUM_ASSEMBLY(6)	0.044
77	THYROID_GLAND_DEVELOPMENT(5)	0.044
78	RESPIRATORY_SYSTEM_PROCESS(5)	0.043
79	NEURON_PROJECTION_GUIDANCE(5)&AXON_GUIDANCE(6)	0.043
80	ADULT_WALKING_BEHAVIOR(5)	0.043
81	DETECTION_OF_MECHANICAL_STIMULUS_INVOLVED_IN_SENSORY_PERCEPTION(5)	0.042
82	NEURON_DEATH(5)	0.045
83	CELLULAR_POTASSIUM_ION_TRANSPORT(4)	0.045
84	ADULT_BEHAVIOR(4)	0.045
85	LUNG_EPITHELIUM_DEVELOPMENT(5)	0.045
86	TRANSMISSION_OF_NERVE_IMPULSE(5)	0.046
87	CELL_CELL_SIGNALING(4)	0.045
88	NEGATIVE_REGULATION_OF_NEURON_DEATH(5)	0.045
89	AMEBOIDAL_TYPE_CELL_MIGRATION(5)	0.045
90	NEGATIVE_REGULATION_OF_NEUROGENESIS(5)	0.045
91	CIRCULATORY_SYSTEM_PROCESS(5)	0.045
92	FEAR_RESPONSE(5)	0.045
93	NEGATIVE_REGULATION_OF_NEURAL_PRECURSOR_CELL_PROLIFERATION(5)	0.049
94	REGULATION_OF_NEURON_APOPTOTIC_PROCESS(6)	0.049
95	GLIAL_CELL_DEVELOPMENT(5)	0.050
96	DEVELOPMENTAL_PIGMENTATION(4)	0.050