

Table S3. Differential gene expression of PTP family members in MS grey matter lesions

	GML vs CGM			GML vs NAGM			NAGM vs CGM	
	Fold	Pvalue		Fold	Pvalue		Fold	Pvalue
DUSP2	-7.79	0.000	CDC25C	-5.25	0.007	DUSP1	-5.65	0.003
CDC25C	-4.66	0.317	DUSP2	-1.99	0.003	DUSP5	-4.94	0.005
DUSP6	-3.31	0.011	MTMR7	-1.69	0.006	DUSP2	-3.91	0.000
CDKN3	-2.80	0.078	DUSP4	-1.59	0.017	DUSP6	-3.36	0.010
DUSP4	-2.77	0.010	DUSP12	-1.56	0.009	TENC1	-2.25	0.009
DUSP5	-2.47	0.013	ACP1	-1.49	0.007	PTPRD	-2.21	0.022
DUSP1	-1.68	0.011	CDKN3	-1.43	0.270	PTPN18	-2.15	0.101
PTP4A3	-1.67	0.031	MTMR4	-1.42	0.006	PTP4A3	-2.04	0.003
PTP4A1	-1.42	0.011	PTPRR	-1.35	0.013	DUSP18	-1.98	0.018
MTMR11	-1.38	0.099	PTP4A1	-1.34	0.001	CDKN3	-1.96	0.025
PTPN5	-1.35	0.060	PTPRN	-1.34	0.010	PTPN7	-1.91	0.299
PTP4A2	-1.35	0.043	PTPN1	-1.31	0.139	PTPN6	-1.86	0.022
PTPN3	-1.34	0.051	MTMR1	-1.29	0.028	CDC14b	-1.85	0.092
PTPN1	-1.29	0.255	PTPRO	-1.28	0.009	DUSP8	-1.79	0.003
DUSP12	-1.29	0.130	DUSP11	-1.23	0.050	PTPN3	-1.79	0.034
PTPRN	-1.23	0.055	PTPDC1	-1.09	0.212	PTPN22	-1.76	0.044
MTMR8	-1.23	0.124	PTPRH	-1.07	0.419	CDC14A	-1.76	0.010
PTPRN2	-1.18	0.086	PTPRQ2	-1.06	0.094	DUSP4	-1.74	0.029
MTMR7	-1.16	0.102	MTMR2	-1.05	0.012	DUSP15	-1.72	0.042
DUSP14	-1.10	0.275	PTPN4	-1.05	0.190	TNS1	-1.70	0.015
PTPN6	-1.10	0.344	DUSP10	-1.03	0.443	PTPN12	-1.69	0.020
MTMR9	-1.07	0.342	DUSP19	-1.01	0.467	PTPRS	-1.67	0.004
MTMR4	-1.06	0.056	DUSP3	-1.00	0.494	PTP4A2	-1.64	0.024
PTPRH	-1.04	0.474	DUSP22	1.00	0.497	SBF2	-1.53	0.004
CDC14b	-1.03	0.460	SSH2	1.01	0.393	PTPRZ1	-1.52	0.041
CDC25A	-1.03	0.485	DUSP6	1.02	0.244	MTMR11	-1.51	0.032
PTPN11	-1.03	0.284	MTMR6	1.06	0.270	hEPM2A	-1.47	0.007
PTPMT1	-1.02	0.391	DUSP14	1.07	0.264	PTPN5	-1.46	0.038
PTPDC1	-1.01	0.467	PTEN	1.07	0.181	TNS3	-1.45	0.006
DUSP15	-1.00	0.495	PTPN5	1.08	0.066	MTMR3	-1.43	0.001
DUSP3	1.01	0.416	MTMR8	1.08	0.388	PTPRG	-1.43	0.054
PTPRZ1	1.03	0.212	MTMR11	1.09	0.314	PTPN21	-1.43	0.045
hEPM2A	1.03	0.362	PTPRA	1.11	0.040	DUSP23	-1.42	0.022
MTMR1	1.03	0.302	PTPN11	1.13	0.045	DUSP9	-1.37	0.216
PTPRR	1.04	0.367	PTPMT1	1.13	0.029	PTPRM	-1.37	0.016
PTPRO	1.04	0.389	MTMR9	1.14	0.040	PTPRN2	-1.37	0.033
SBF2	1.06	0.220	PTPRN2	1.15	0.061	PTPN13	-1.36	0.095
PTPRG	1.11	0.112	hRNGTT	1.19	0.050	PTPN9	-1.34	0.102
PTPRM	1.11	0.129	CDC25A	1.19	0.345	MTMR8	-1.33	0.181
MTMR6	1.12	0.077	DUSP7	1.20	0.022	PTPRJ	-1.31	0.028
PTPRQ2	1.13	0.247	PTP4A2	1.21	0.026	PTPRT	-1.27	0.062
SSH3	1.15	0.105	PTPN2	1.22	0.115	STYXL1	-1.24	0.036
PTPN22	1.15	0.373	PTP4A3	1.22	0.114	CDC25A	-1.23	0.344
PTPRE	1.15	0.069	PTPN23	1.25	0.109	MTMR9	-1.22	0.201
PTEN	1.16	0.028	CDC25B	1.25	0.031	SSH3	-1.19	0.030
MTMR12	1.18	0.027	PTPRE	1.27	0.045	PTPRU	-1.19	0.142
DUSP10	1.18	0.247	PTPN14	1.29	0.034	DUSP14	-1.18	0.160
ACP1	1.18	0.119	MTMR12	1.32	0.003	PTPN11	-1.16	0.033
PTPRJ	1.19	0.064	PTPN3	1.33	0.015	PTPMT1	-1.16	0.041
PTPN23	1.19	0.077	DUSP16	1.34	0.060	SBF1	-1.14	0.110

<b>PTPRA</b>	1.22	0.011	<b>SSH1</b>	1.37	0.048	<b>MTMR12</b>	-1.12	0.099
<b>DUSP22</b>	1.22	0.040	<b>SSH3</b>	1.37	0.008	<b>PTPRE</b>	-1.10	0.149
<b>hRNGTT</b>	1.23	0.091	<b>PTPRC</b>	1.38	0.109	<b>PTP4A1</b>	-1.05	0.162
<b>STYXL1</b>	1.23	0.027	<b>PTPRF</b>	1.40	0.001	<b>PTPN23</b>	-1.04	0.306
<b>DUSP11</b>	1.24	0.110	<b>SBF1</b>	1.45	0.015	<b>PTPRF</b>	-1.04	0.284
<b>SSH2</b>	1.25	0.074	<b>STYX</b>	1.46	0.007	<b>PTPRC</b>	-1.00	0.427
<b>PTPN13</b>	1.26	0.068	<b>hEPM2A</b>	1.51	0.007	<b>MTM1</b>	1.00	0.500
<b>PTPN18</b>	1.27	0.182	<b>PTPRM</b>	1.53	0.003	<b>PTPN1</b>	1.01	0.469
<b>SBF1</b>	1.27	0.008	<b>STYXL1</b>	1.53	0.012	<b>DUSP3</b>	1.01	0.358
<b>PTPN4</b>	1.28	0.079	<b>PTPRJ</b>	1.56	0.041	<b>PTPRK</b>	1.02	0.455
<b>PTPN9</b>	1.28	0.057	<b>PTPRZ1</b>	1.56	0.024	<b>PTPRH</b>	1.03	0.484
<b>PTPRD</b>	1.28	0.115	<b>PTPRK</b>	1.57	0.007	<b>hRNGTT</b>	1.04	0.405
<b>PTPRS</b>	1.29	0.041	<b>PTPRG</b>	1.59	0.006	<b>CDC25B</b>	1.04	0.315
<b>DUSP8</b>	1.29	0.008	<b>SBF2</b>	1.63	0.005	<b>MTMR6</b>	1.05	0.195
<b>CDC25B</b>	1.30	0.033	<b>PTPRT</b>	1.67	0.010	<b>STYX</b>	1.06	0.372
<b>DUSP7</b>	1.31	0.019	<b>MTM1</b>	1.67	0.064	<b>PTPDC1</b>	1.07	0.257
<b>PTPRT</b>	1.32	0.020	<b>PTPN6</b>	1.69	0.037	<b>PTEN</b>	1.08	0.188
<b>PTPRF</b>	1.35	0.015	<b>DUSP15</b>	1.71	0.044	<b>PTPRN</b>	1.09	0.216
<b>PTPRC</b>	1.37	0.100	<b>PTPN9</b>	1.72	0.002	<b>DUSP7</b>	1.09	0.207
<b>DUSP18</b>	1.38	0.063	<b>MTMR10</b>	1.72	0.005	<b>PTPRA</b>	1.10	0.054
<b>MTMR2</b>	1.38	0.032	<b>PTPN13</b>	1.72	0.023	<b>CDC25C</b>	1.13	0.431
<b>PTPN7</b>	1.47	0.287	<b>CDC14b</b>	1.79	0.034	<b>DUSP16</b>	1.15	0.074
<b>PTPN2</b>	1.52	0.009	<b>DUSP5</b>	2.00	0.023	<b>MTMR10</b>	1.15	0.014
<b>PTPN12</b>	1.52	0.010	<b>PTPN22</b>	2.03	0.089	<b>PTPRQ2</b>	1.20	0.138
<b>DUSP16</b>	1.53	0.021	<b>PTPRS</b>	2.15	0.003	<b>DUSP12</b>	1.21	0.107
<b>DUSP23</b>	1.54	0.007	<b>DUSP23</b>	2.19	0.001	<b>DUSP10</b>	1.22	0.013
<b>STYX</b>	1.55	0.030	<b>DUSP8</b>	2.32	0.003	<b>DUSP22</b>	1.22	0.125
<b>TENC1</b>	1.58	0.009	<b>DUSP9</b>	2.34	0.085	<b>PTPRB</b>	1.23	0.040
<b>PTPRK</b>	1.59	0.017	<b>MTMR3</b>	2.44	0.001	<b>SSH2</b>	1.23	0.104
<b>MTM1</b>	1.67	0.062	<b>TNS3</b>	2.45	0.002	<b>PTPN2</b>	1.25	0.055
<b>PTPN14</b>	1.68	0.046	<b>PTPN12</b>	2.58	0.003	<b>SSH1</b>	1.28	0.033
<b>TNS3</b>	1.69	0.002	<b>DUSP18</b>	2.72	0.004	<b>PTPN14</b>	1.31	0.062
<b>MTMR3</b>	1.70	0.002	<b>PTPN18</b>	2.72	0.010	<b>MTMR1</b>	1.33	0.016
<b>DUSP9</b>	1.70	0.189	<b>PTPN7</b>	2.82	ND	<b>MTMR4</b>	1.33	0.002
<b>TNS1</b>	1.74	0.007	<b>PTPRD</b>	2.83	0.004	<b>PTPRO</b>	1.34	0.031
<b>SSH1</b>	1.75	0.007	<b>PTPRU</b>	2.92	0.002	<b>PTPN4</b>	1.34	0.023
<b>DUSP19</b>	1.85	0.007	<b>TNS1</b>	2.96	0.000	<b>PTPRR</b>	1.40	0.006
<b>MTMR10</b>	1.98	0.002	<b>PTPN21</b>	3.33	0.054	<b>MTMR7</b>	1.45	0.015
<b>CDC14A</b>	2.26	0.009	<b>DUSP1</b>	3.36	0.001	<b>MTMR2</b>	1.46	0.027
<b>PTPN21</b>	2.33	0.058	<b>TENC1</b>	3.55	0.002	<b>DUSP11</b>	1.53	0.008
<b>PTPRU</b>	2.45	0.003	<b>CDC14A</b>	3.97	0.002	<b>ACP1</b>	1.77	0.011
<b>PTPRB</b>	10.06	0.169	<b>PTPRB</b>	8.19	0.175	<b>DUSP19</b>	1.88	0.016

ND: Non Determined; GML: Gray Matter lesioned; CGM: Control Gray Matter; NAGM: Normal-appearing Gray Matter