

Supplementary Table 1.

	Cytosine modifications	Bulk RNAseq	Single cell RNAseq	Used in manuscript
Non-tumor	4	2	3	2
Astrocytoma	7	7	7	7
Embryonal	6	6	6	6
Ependymoma	12	10	12	10
Glioneuronal/Neuronal	8	8	8	8
Total	37	34	35	33

Supplementary Table 2.

A Tumor purity and grade vs 5-hmC MDI

	Estimate	Std Error	P-value
Tumor purity	-0.007	0.005	0.22
G1	Referent		
G2	0.001	0.004	0.90
G3	0.002	0.004	0.68
G4	0.0005	0.004	0.90
NEC/NOS	0.0004	0.006	0.94

B Tumor purity and grade vs 5-mC MDI

	Estimate	Std Error	P-value
Tumor purity	0.003	0.012	0.80
G1	Referent		
G2	0.028	0.010	0.0074
G3	0.020	0.008	0.025
G4	0.043	0.009	4.5E-5
NEC/NOS	0.016	0.013	0.24

Supplementary Table 3.

Astrocytoma

	Body	Both	Neither	Promoter	Total
Decrease	0	0	0	0	0
Increase	5	0	4	3	12
Total	5	0	4	3	12

Embryonal tumors

	Body	Both	Neither	Promoter	Total
Decrease	6	0	1	10	17
Increase	44	0	13	17	74
Total	50	0	14	27	91

Ependymoma

	Body	Both	Neither	Promoter	Total
Decrease	0	0	0	1	1
Increase	1	0	0	4	5
Total	1	0	0	5	6

Glioneuronal/neuronal tumors

	Body	Both	Neither	Promoter	Total
Decrease	0	0	0	0	0
Increase	6	0	2	5	13
Total	6	0	2	5	13

Supplementary Table 4.

Tumor type	Nuclei N	Neuronal- like	Progenitor- like	NEU	NSC	OPC	RGC	UBC
Astrocytoma	7714	1280	4543	1280	685	3269	485	104
Embryonal	12936	462	7649	462	3380	446	448	3375
Ependymoma	22287	204	19679	204	1695	9582	8120	282
Glioneuronal/ Neuronal	16016	3848	4694	3848	731	2189	1730	44
Non-Tumor	17451	8394	1431	8394	29	1224	174	4

Supplementary Table 5.

	ATC	EMB	EPN	GNN
Hypo-hydroxymethylated in neuronal-like cells	3741	4829	1031	2963
Hyper-hydroxymethylated in neuronal-like cells	15892	6589	2161	2027
Hypo-hydroxymethylated in progenitor-like cells	2270	16099	40216	5233
Hyper-hydroxymethylated in progenitor-like cells	2270	2644	4111	1444