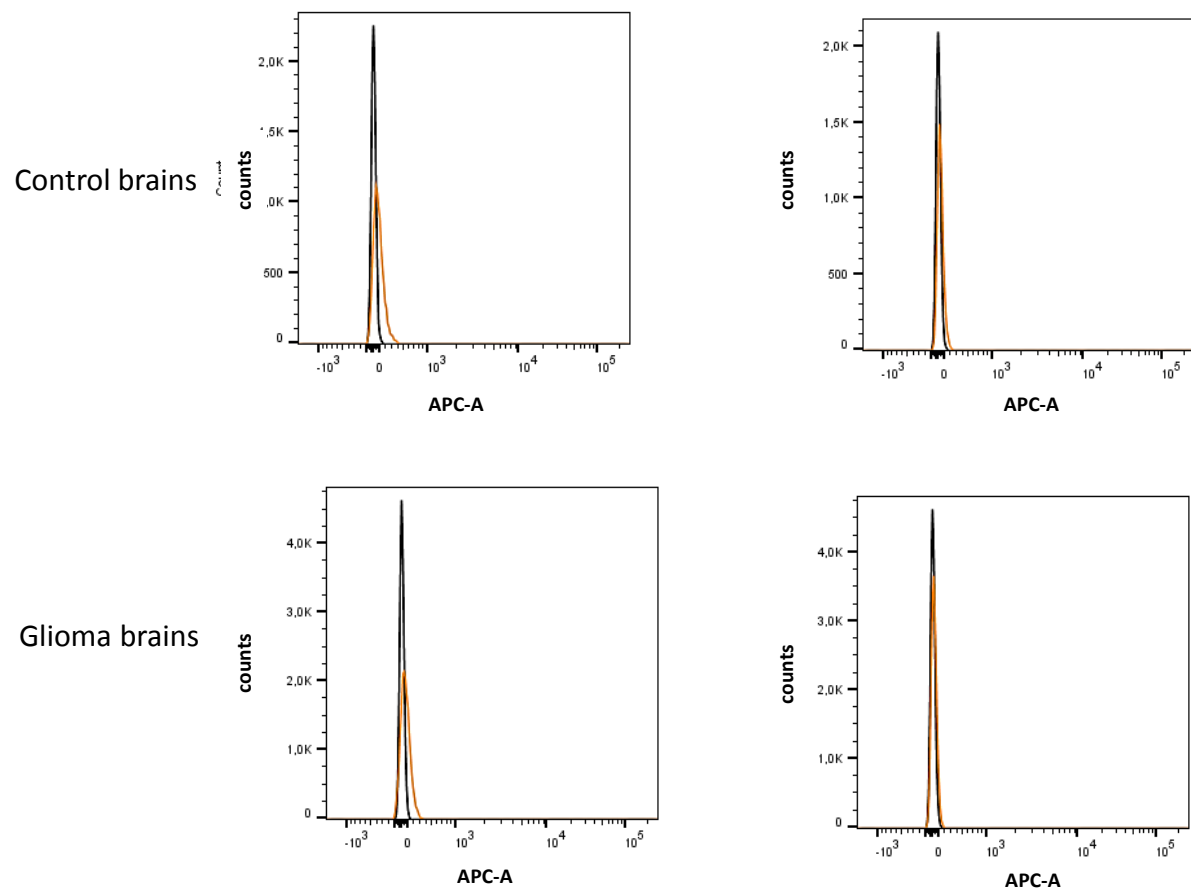


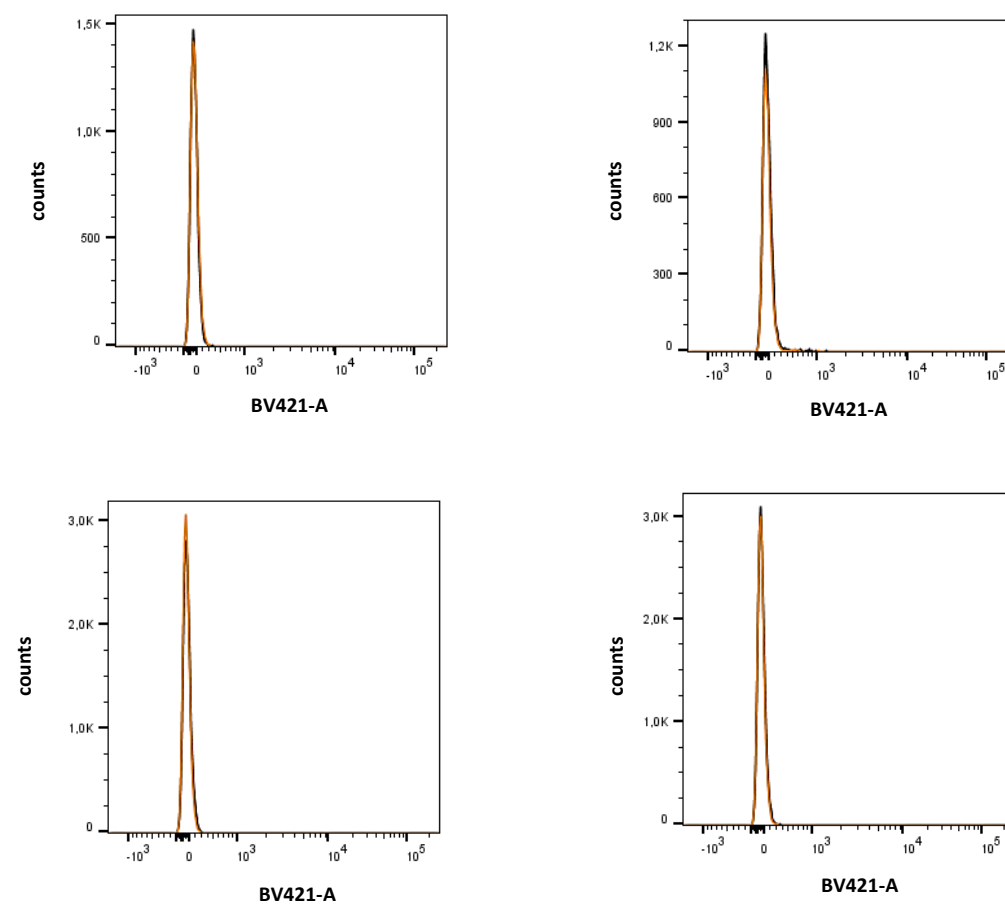
**Table S1.** List of antibodies used in flow cytometry experiments

Antibody	Host species/ Type	Concentration used	Fluorochrome	Manufacturer/ Ref
H3	Rabbit/IgG	1µg/ml	Pacific Blue™	Cell signaling 12167
Isotype H3	Rabbit/IgG	1µg/ml	Pacific Blue™	Cell signaling 9078
H3K4me3	Rabbit/IgG	1µg/ml	Alexa Fluor® 647	Cell signaling 120645
Isotype H3K4me3	Rabbit/IgG	1µg/ml	Alexa Fluor® 647	Cell signaling 2985
H3K4me2	Rabbit/IgG	10µg/ml	Alexa Fluor® 647	Abcam Ab200026
Isotype H3K4me2	Rabbit/IgG	10µg/ml	Alexa Fluor® 647	Cell signaling 2985
H3K9me2	Mouse IgG	10µg/ml	Alexa Fluor® 647	Abcam Ab150115

(A)

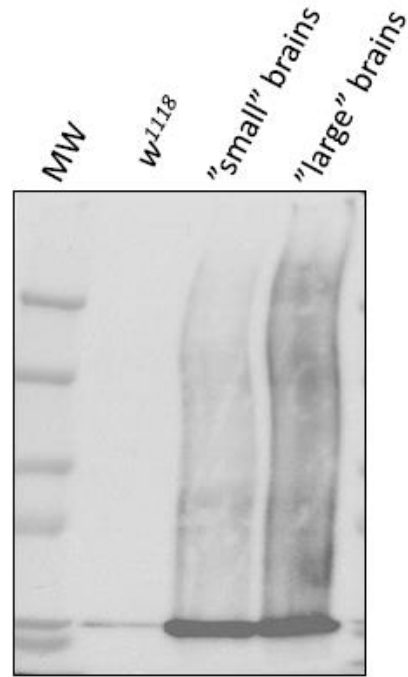


(B)

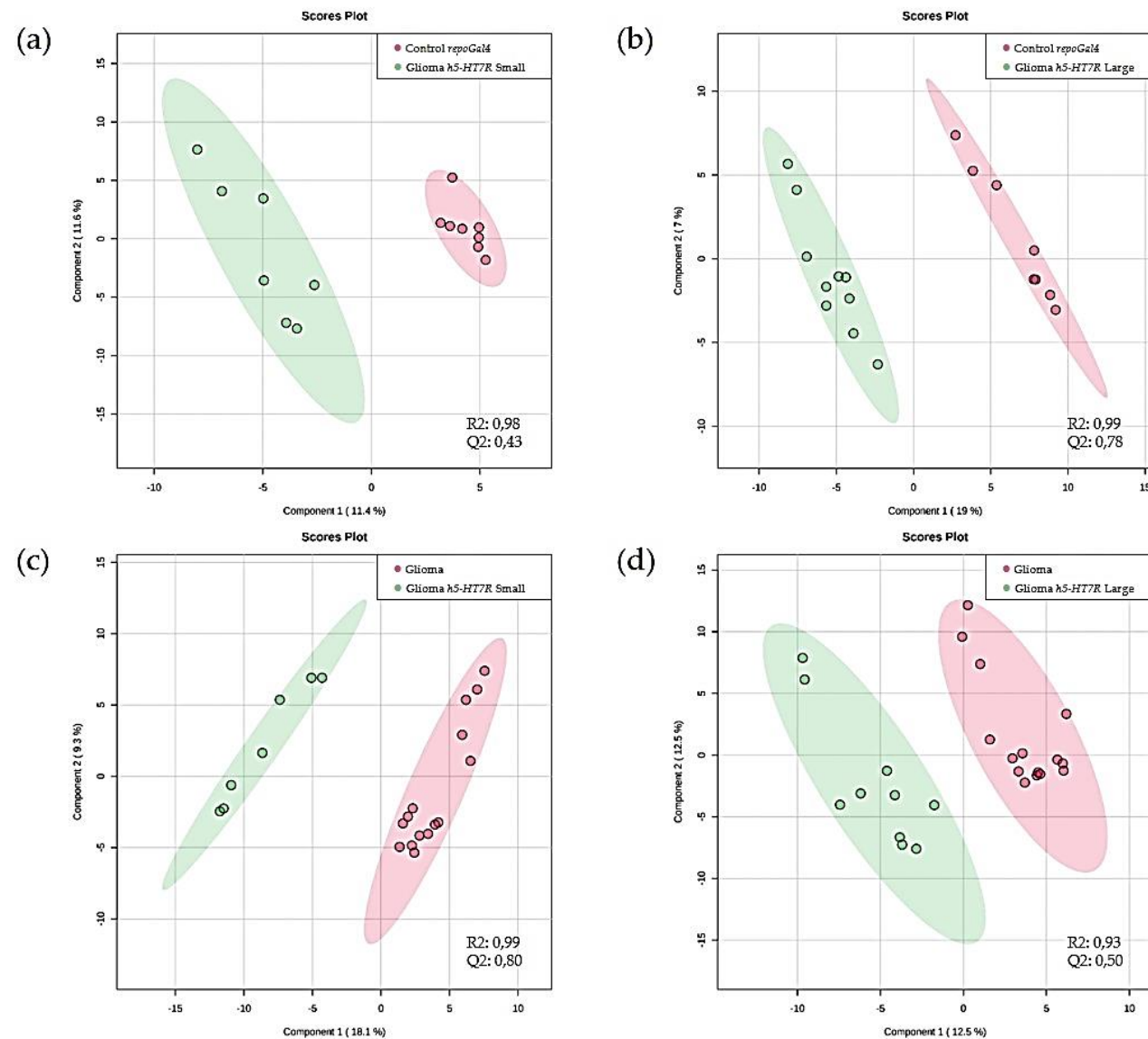


— white cells  
— isotypic control

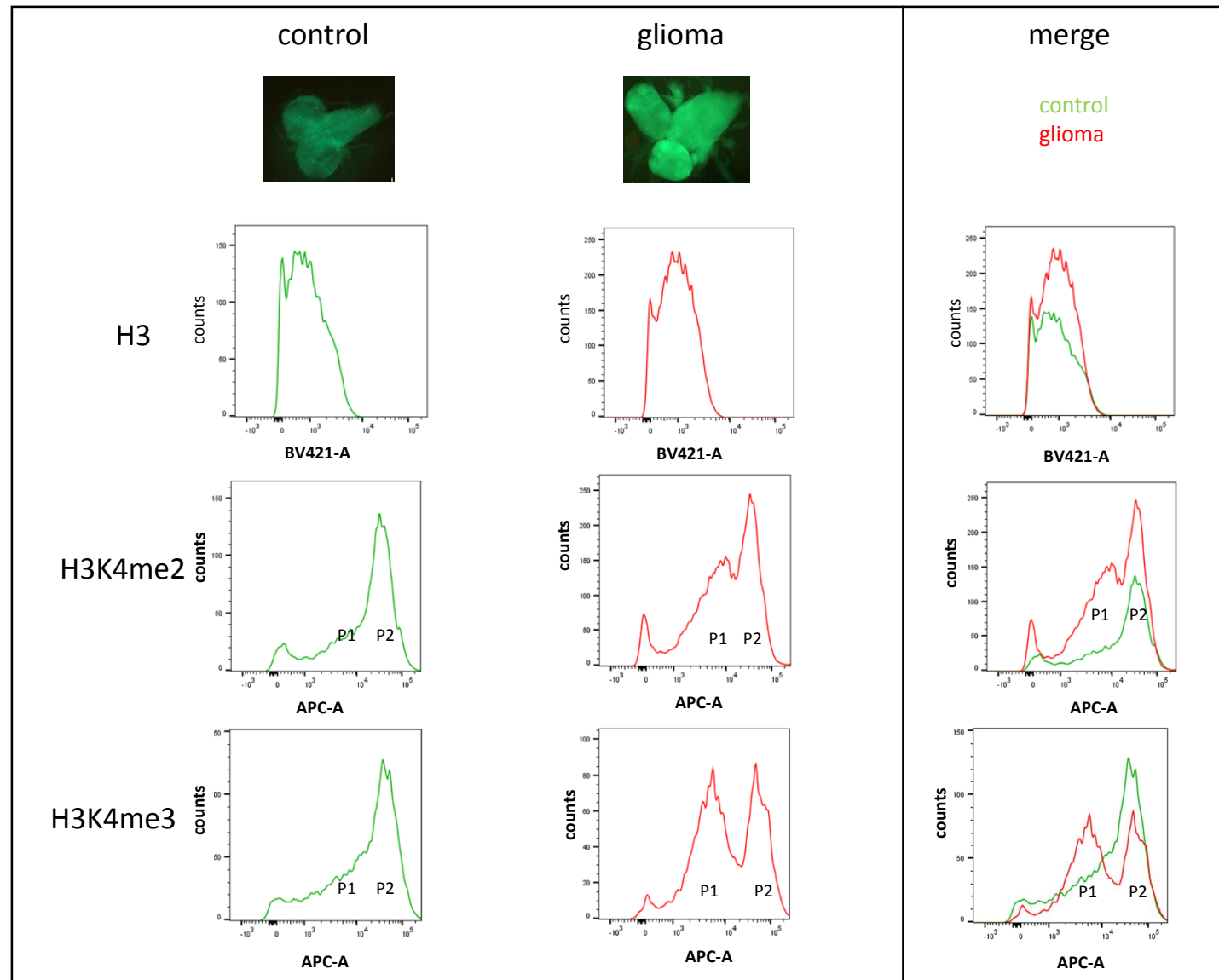
**Figure S1.** Flow cytometry controls. White cells and isotypic controls in gliomas and control brains:



**Figure S2.** Expression of h5-HT7R in “small” and “large” brains expressing h5-HT7R (repo>dp110<sup>CAAX</sup>; h5-HT7R; dEGFR<sup>λ</sup>). Controls are w<sup>1118</sup> brains. Antibodies directed against the FLAG tag were used. MW: Molecular weight marker



**Figure S3.** PLS–DA score plots. (a) Comparison of controls brains (*repo-Gal4*), and “small” brains expressing *h5-HT7R* in a glioma context, (b) Comparison of controls brains (*repo-Gal4*), and “large” brains expressing *h5-HT7R* in a glioma context. (c) Comparison of gliomas and “small” brains expressing *h5-HT7R* in a glioma context, (d) Comparison of gliomas and “large” brains expressing *h5-HT7R* in a glioma context



**Figure S4.** Analysis of H3 content and H3K4me2/3 by flow cytometry in glial cells (GFP labelled cells). Pattern of H3 labelling and H3K4me2/3 labelling in glial cells are shown for controls (*repo>GFP*) and glioma (*repo>dp110<sup>CAAX</sup>; dEGFR<sup>λ</sup>*). Two populations of glial cells P1 and P2 differing by their methylation rate have been identified