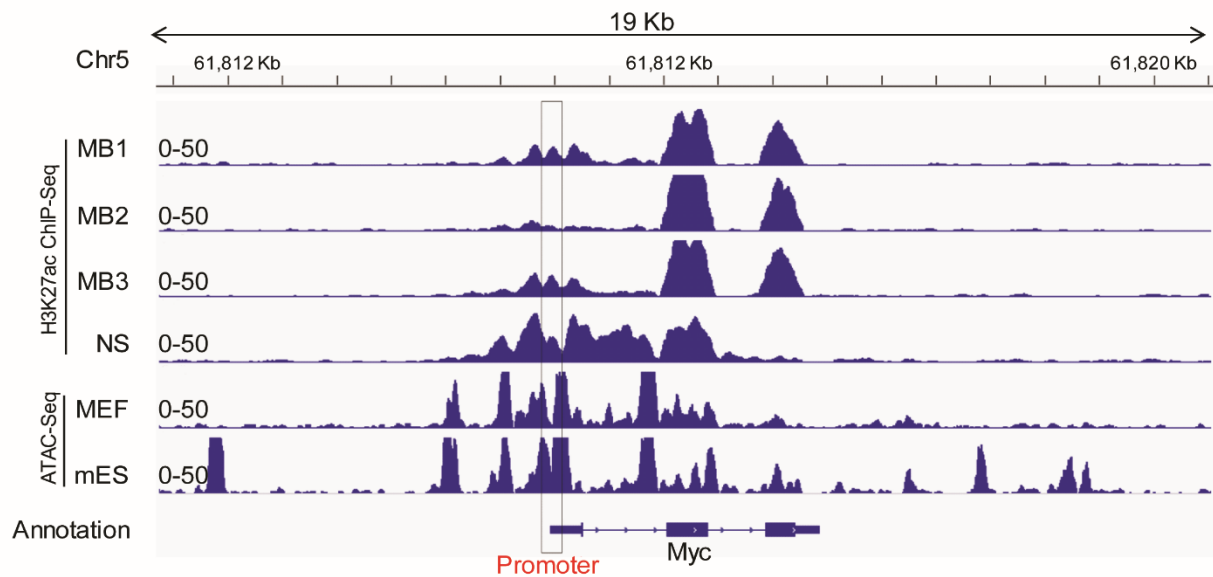


## **Supplementary Information**

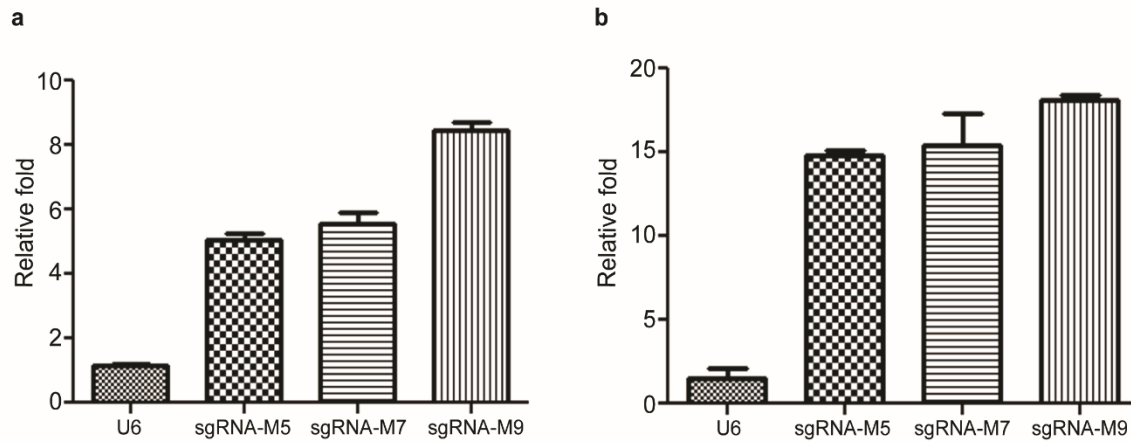
### **Mouse medulloblastoma driven by CRISPR activation of cellular *Myc***

BaoHan T. Vo, Jin Ah Kwon, Chunliang Li, David Finkelstein, Beisi Xu, Brent A. Orr, Charles  
J. Sherr & Martine F. Roussel

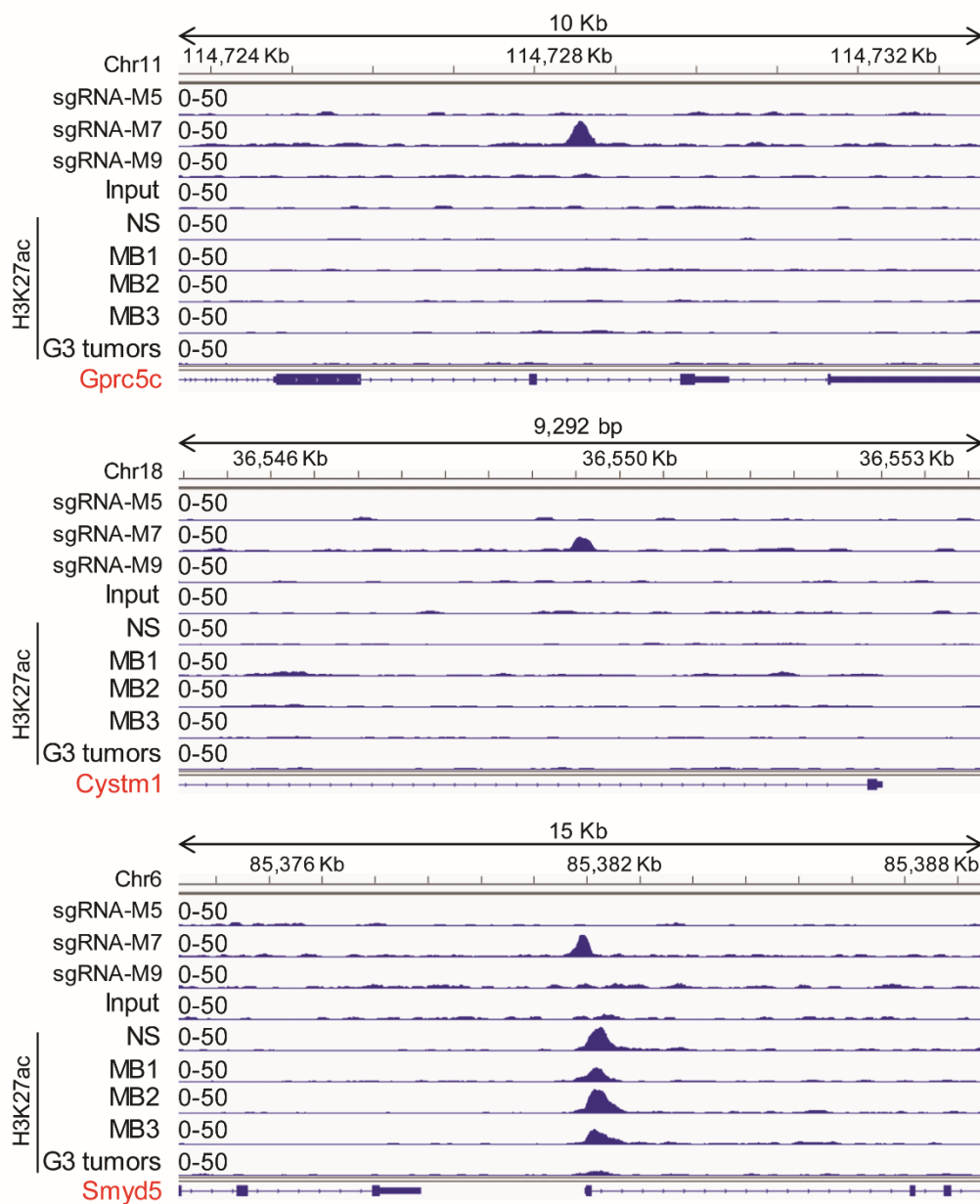
**Figure S1.** Epigenetic profiles of the Myc gene in different mouse G3 tumors. ChIP-Seq data of H3K27ac marks in tumor cells from three mouse Retro-Myc G3 MBs (MB1, MB2 and MB3) cell lines and neurosphere cells (NS) in the open chromatin region of the mouse Myc promoter. ATAC-Seq of MEF and mES cells. The location of the Myc promoter region used for the design of sgRNAs is noted by the highlighted black box.



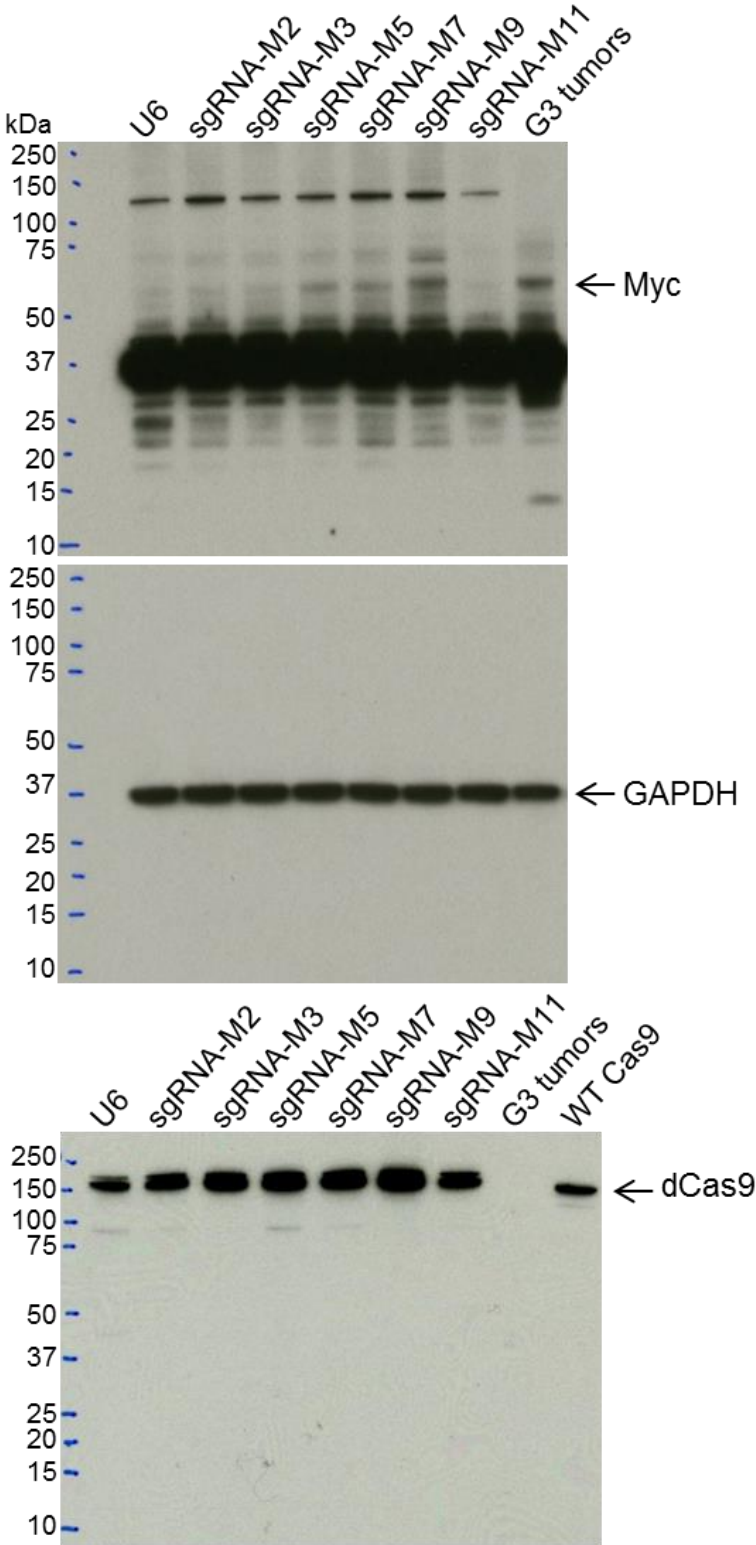
**Figure S2.** Quantitative RT-PCR of Myc expression in NIH3T3 cells. NIH3T3 cells transfected with U6, sgRNA-M5, M7 or M9 and primers that specifically bind to the 3'UTR (**a**) or the coding region (**b**) of the Myc promoter. Data are represented as the mean  $\pm$  SEM.



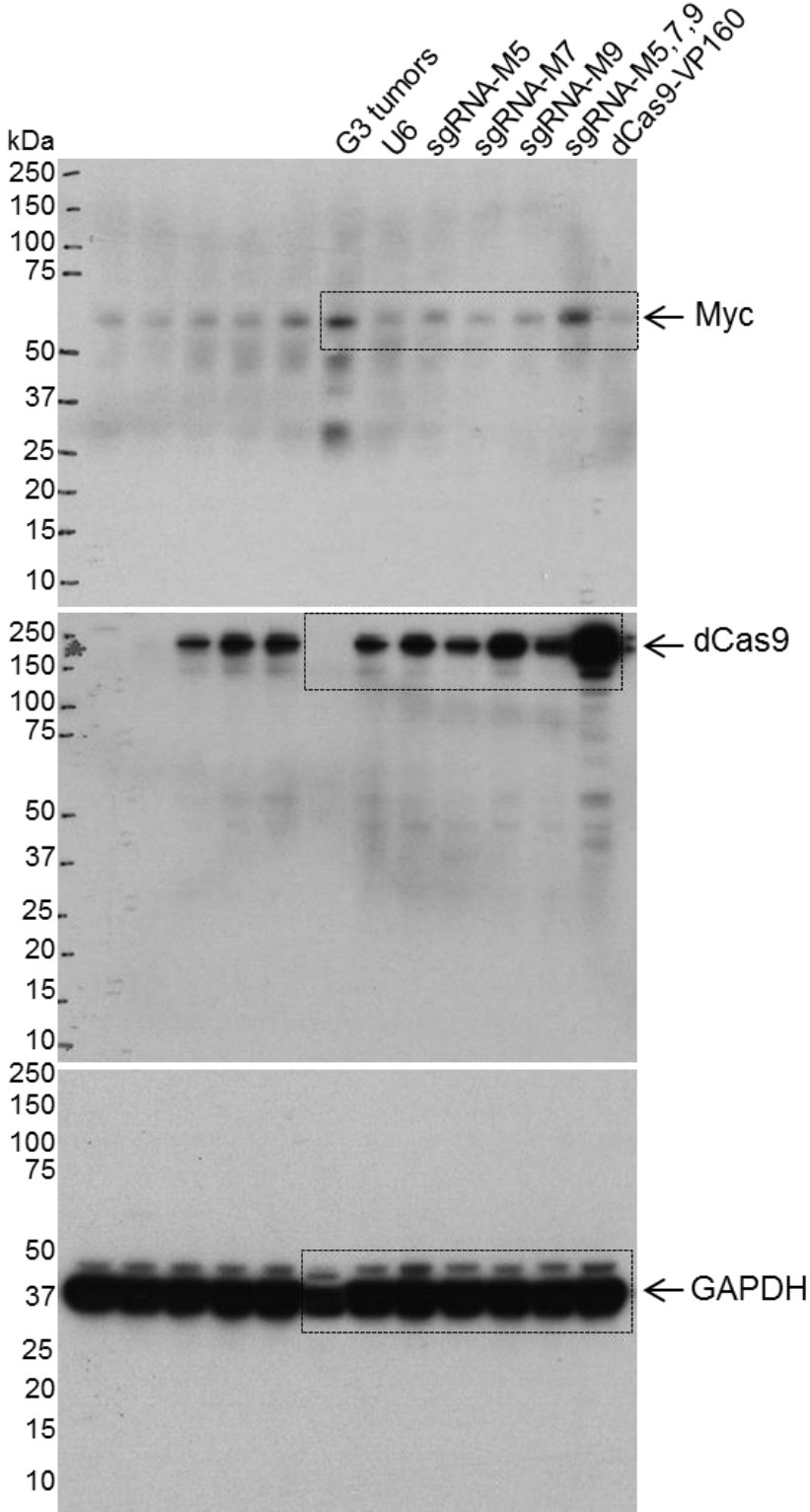
**Figure S3.** Characterization of the binding affinity of sgRNA-M5, 7 and 9 with dCas9-VP64 system, and indel frequency with wild type Cas9. ChIP-Seq data of H3K27ac marks in mouse neurosphere cells (NS), primary purified G3 tumor cells (G3 tumors), tumor cells from three Retro-Myc G3 MBs (MB1, MB2 and MB3) cell lines, and *Trp53*-null NS infected with lentiviruses expressing dCas9 and sgRNA-M5, 7, or 9. Top three off-target sites are located in genes *Gprc5c*, *Cystm1* and *Smyd5* identified by dCas9 ChIP-Seq in sgRNA-M7.



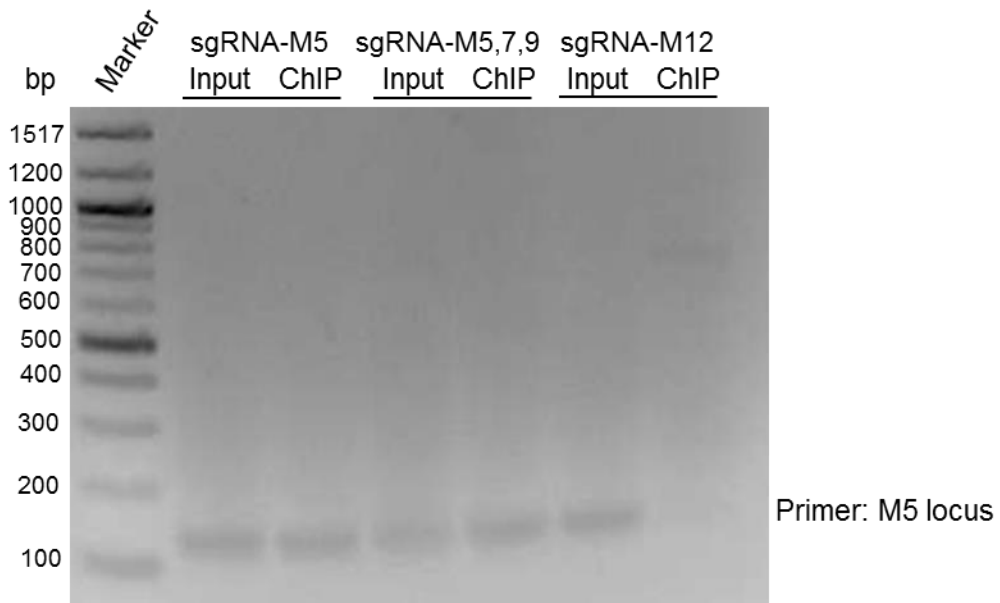
**Figure S4.** Full-length scan of immunoblots. Correspond to data presented in cropped Figure 1e.



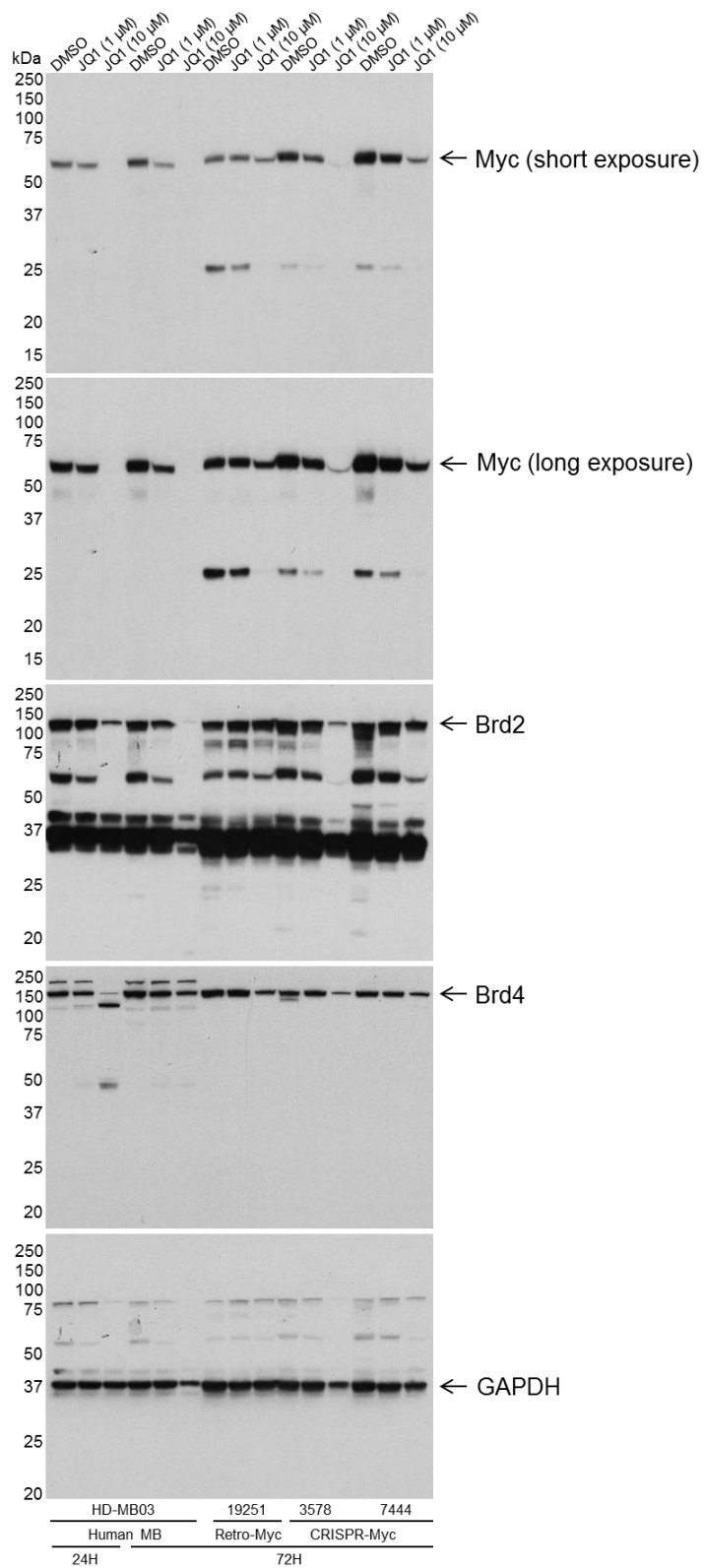
**Figure S5.** Full-length scan of immunoblots. Correspond to data presented in cropped Figure 2a.



**Figure S6.** Full-length scan of agarose gel. Correspond to data presented in Figure 4a.



**Figure S7.** Full-length scan of immunoblots. Correspond to data presented in Figure 5a.





**Supplementary Table S1. Oligomers used to generate target-specific sgRNA vectors.**

<b>Name</b>	<b>Sequence 5' to 3'</b>
sgRNA-M2	GCTGATGTTGGGTCAGTCGC
sgRNA-M3	TCTTAGGTCGCCCCGGAGCG
sgRNA-M5	GGCAGGGCTTCGCCGACGCT
sgRNA-M7	AAATAGAGAGAGGTGGGGAA
sgRNA-M9	ACACCCCGGAGCCGGAGTAC
sgRNA-M11	GGTTGTTCGGGCGCAGCGCT
TALE-TF-1	TCAGCTCCCCTCCTGCCTCC
TALE-TF-2	TGAAGGGCAGGGCTTCGCCG
TALE-TF-3	TTCTCTGGCTAATCCCCGCC
TALE-TF-4	TAGAGAGAGGTGGGGAAGGG
TALE-TF-8	TACACCCCGGAGCCGGAGTA