Development of a screening platform to identify small molecules that modify *ELP1* pre-mRNA splicing in familial dysautonomia.

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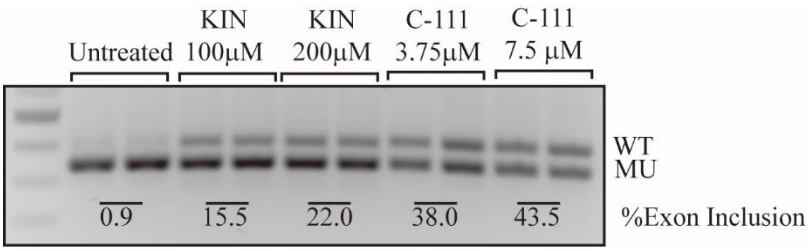

Figure S1. Effect of C-111 compared to kinetin (KIN) treatment on Rluc-FD-Fluc minigene splicing. RT-PCR on HEK-293T transiently transfected with Rluc-FD-Fluc minigene after treatment for 24 hours with kinetin and C-111 at the indicated concentrations. Wild type (WT) and mutant (MU) transcripts are indicated. The experiment was repeated independently four times, agarose gel shown is representative. The percent of exon inclusion for each sample is calculated analyzing band intensity and is indicated in the figure as average of the biological replicates (n=4).

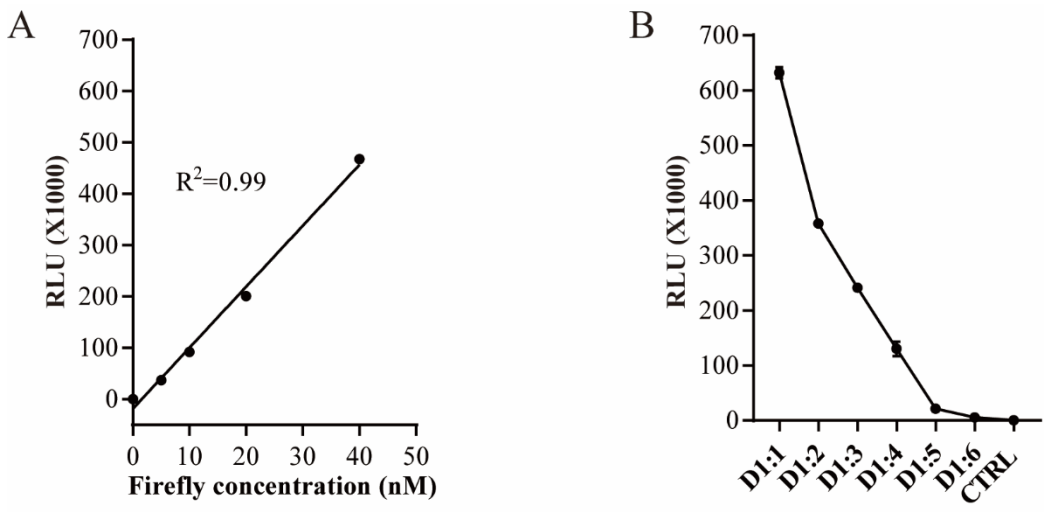

Figure S2. Firefly inhibition assay optimization. The optimal firefly enzyme concentration 20nM (A) and the optimal dilution of the luciferase assay substrate D1:3 (B) have been chosen to maintain the assay in the linearity range.

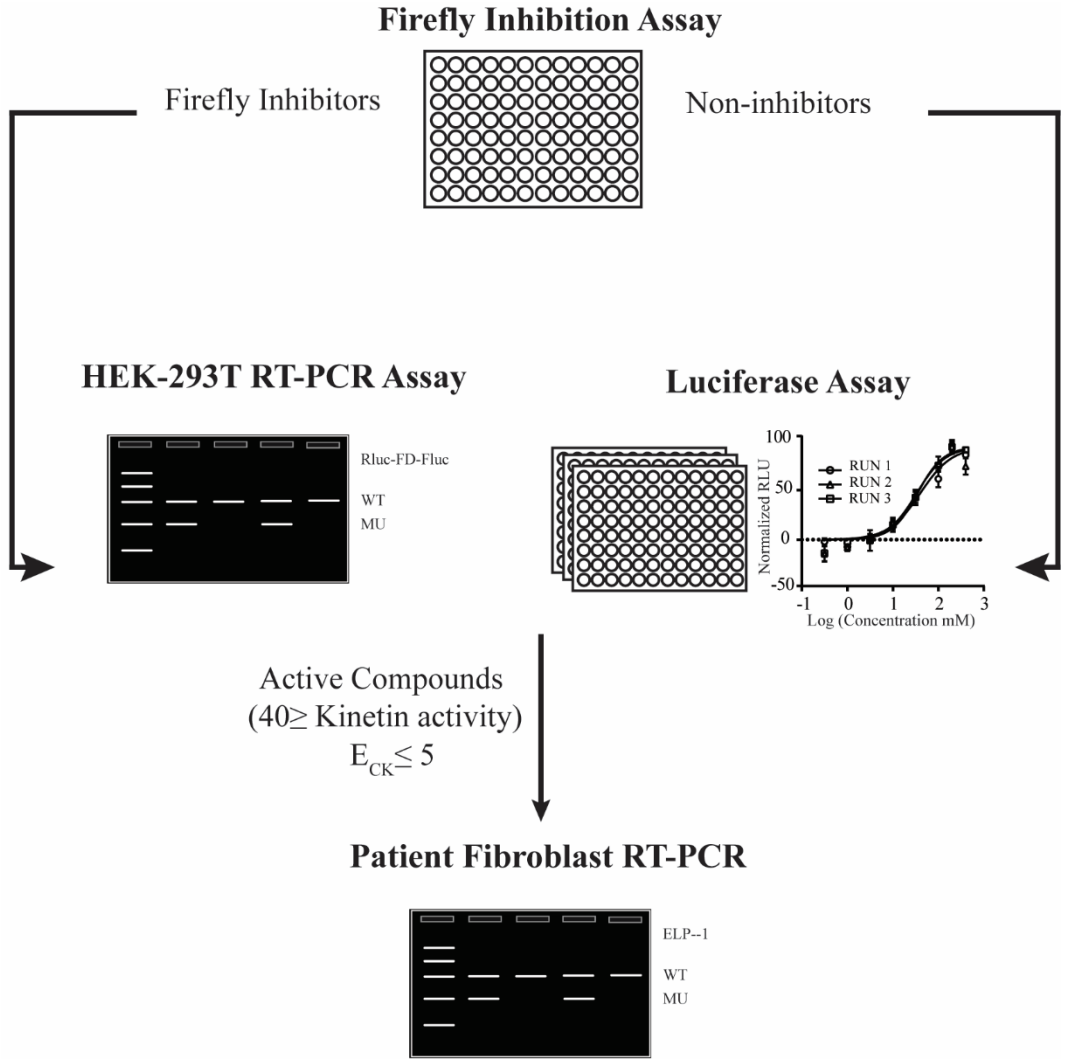

Figure S3. Screening flowchart. The splicing modulation activity of SMCs is measured by RT-PCR or by luciferase assay depending on the inhibition effect on firefly activity. SMCs that have an $E_{ck} \leq 5$ are considered hits and tested in patient fibroblast using RT-PCR.