

## Supplemental Information

### Antisense Oligonucleotide Therapeutic

#### Approach for Suppression of *Ataxin-1*

#### Expression: A Safety Assessment

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# Supplemental information

Table S1: RT-qPCR Primers

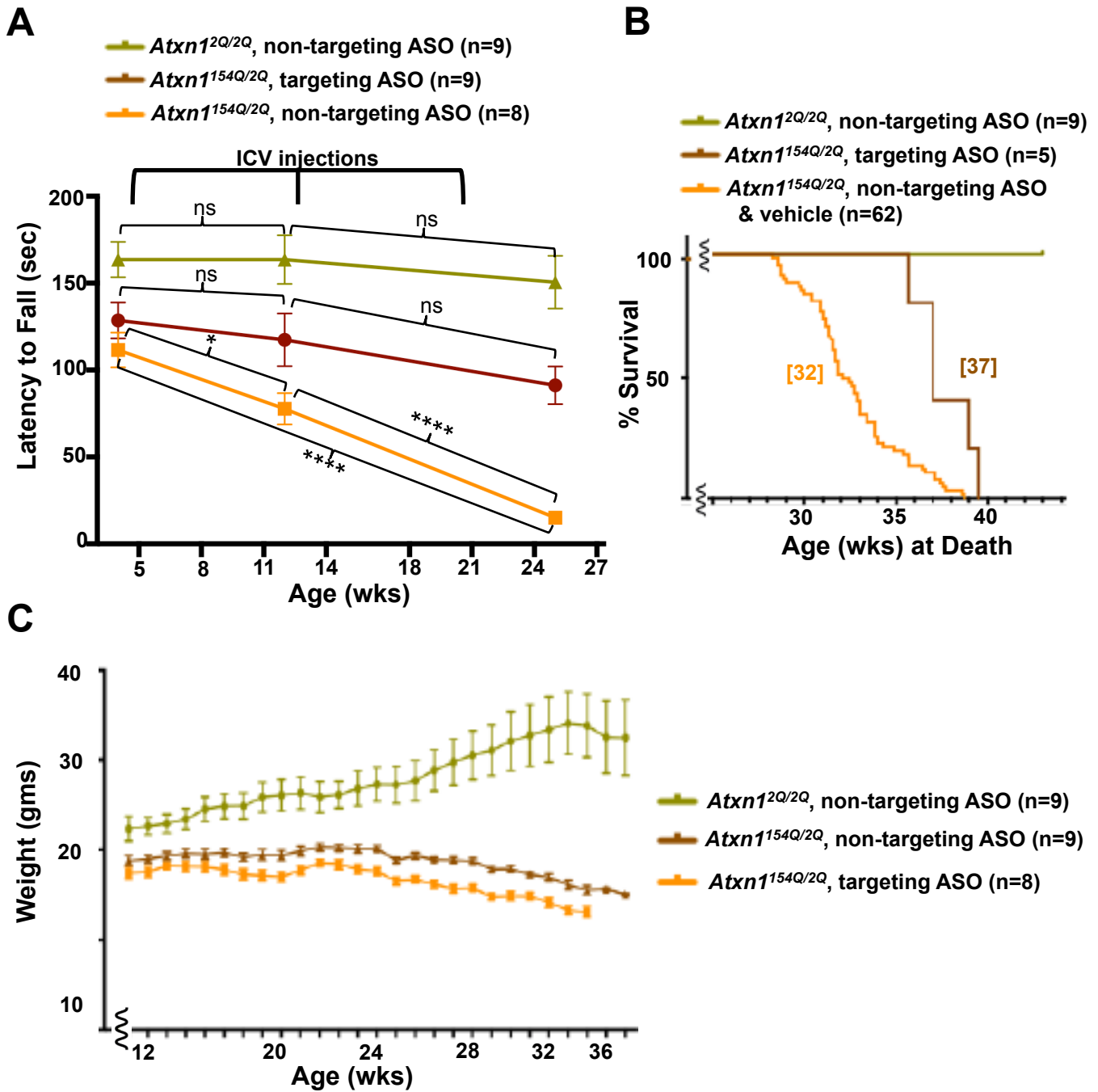
Figure S1

Figure S2

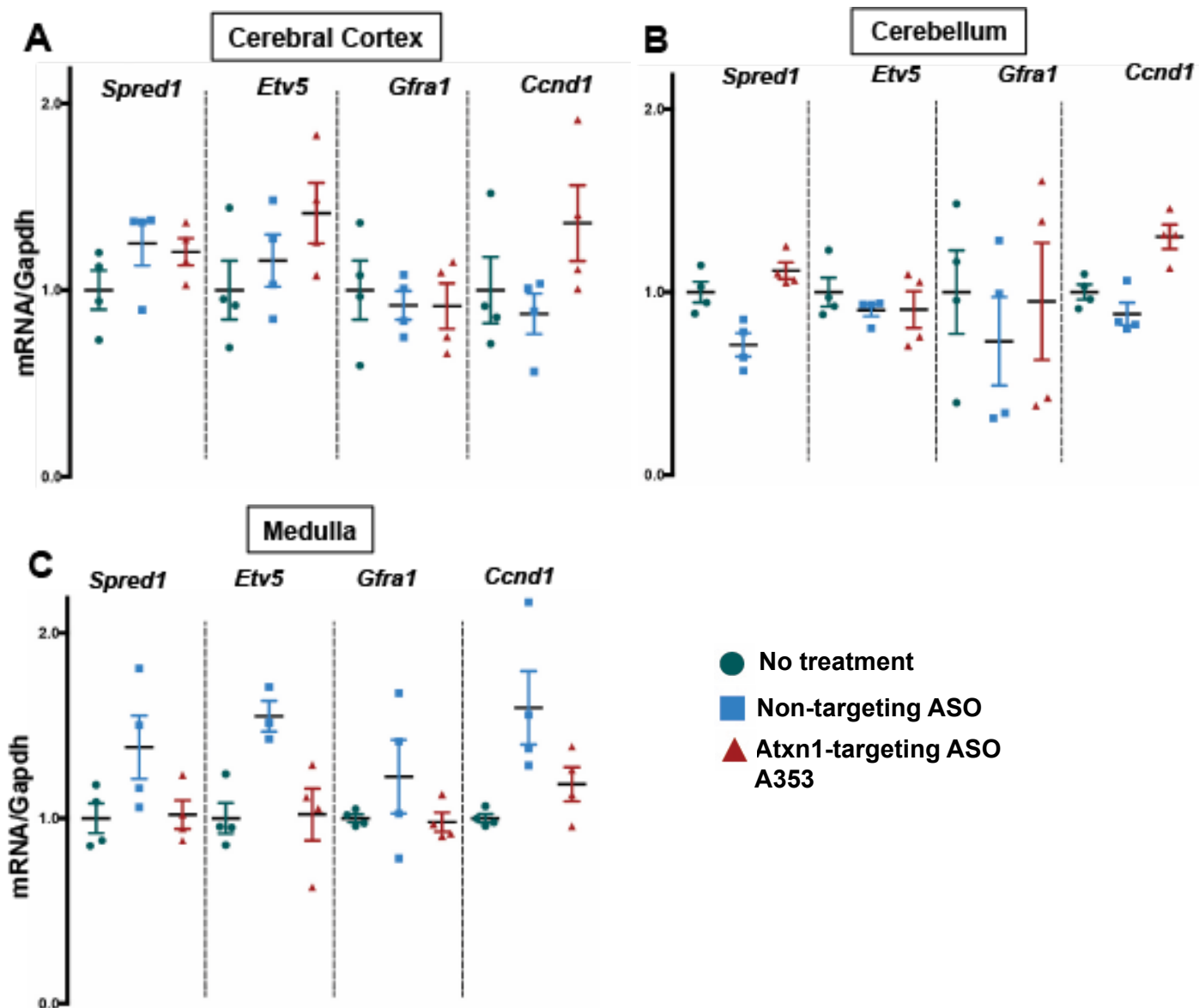
Figure S3

**Table S1: RT-qPCR Primers**

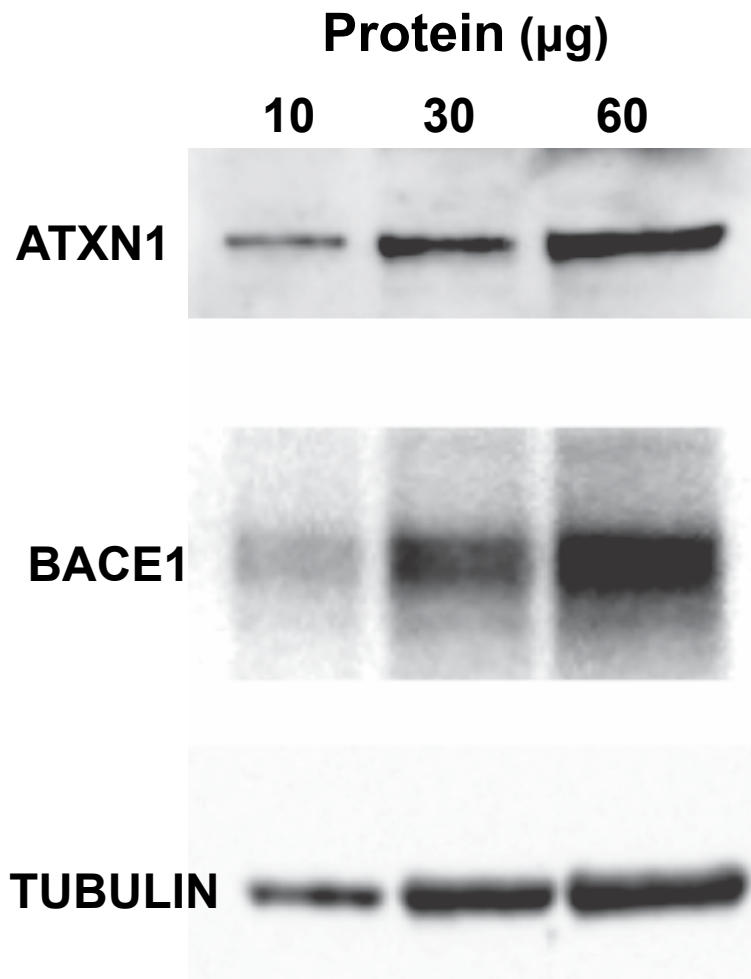
Primer	Sequence	Probe	Roche Catalog #
mDcx1 1171F mDcx1 1241R	AGCTGACTCAGGTAACGACCA GCTTTGACTTAGGTGTTGAGAGC	11	UPL 04685105001
mBace1 809F mBace1 934R	TGCATCGCTACTACCAGAGG CATGAGGGATGCTCACCAG	104	UPL 04682225001
mCcmd1 918F mCcmd1 993R	CAACGCACTTTCTTTCCAGAG AGGGCTTCAATCTGTTCCTG	16	UPL 04686896001
mGfra1 1675R mGfra1 1607F	TGCCCGATACATTGGATTTT TTCCCACACACGTTTACCA	98	UPL 04692152001
mSpred1 664F mSpred1 749R	GAGACGGCGACTTCTGACA AGCCATCCACCACTTGAGTC	9	UPL 04685075001
mEtv5 407R mEtv5 330F	AGCTCCCGTTTGATCTTGG TGAGCAGTTTGTCCCAGATTT	10	UPL 04685091001
mAtxn1 F mAtxn1 R	CACGGTCATTGACACCACACA GGTAGCCGATGACAGGAGGTT	FAM-CAGCCACGG/ZEN/CCTTCTACGCTGG-IABKFQ	
mGapd	Roche		5046211001



**Fig. S1** Three ICV injections of *Atxn1* targeting ASO stabilized motor performance and improved life span but did not improve failure to gain weight. (A) Motor performance on an accelerating rotarod at ages 5, 12 and 25 weeks. Data are presented as the mean  $\pm$  SEM. \*\* $P < 0.01$ , \*\*\* $P < 0.001$ , 1-way ANOVA. (B) Kaplan-Meier curves depicting mouse survival. (C) Failure-to-gain weight phenotype. Weights measured weekly.



**Fig. S2** RT qPCR of 2Q/2Q mice; untreated, non-targeting ASO and Atxn1 targeting ASO was performed for four representative CIC influenced genes associated with gliomas. 2-way ANOVA showed no significant difference between groups



**Fig. S3** Protein dilution Western blot of ATXN1, BACE1, and TUBULIN.