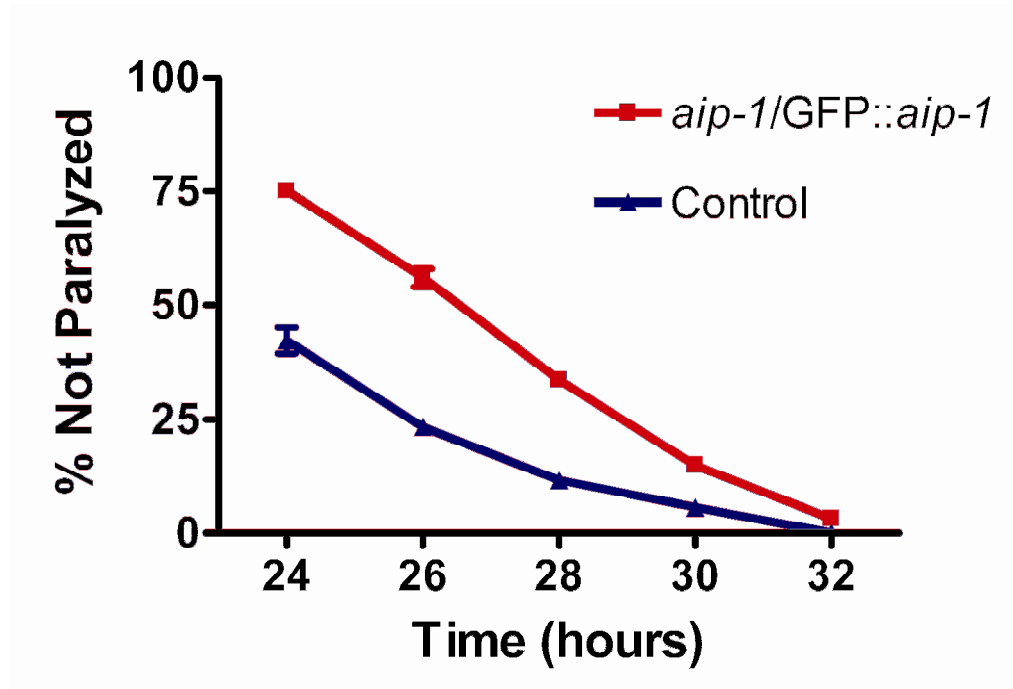
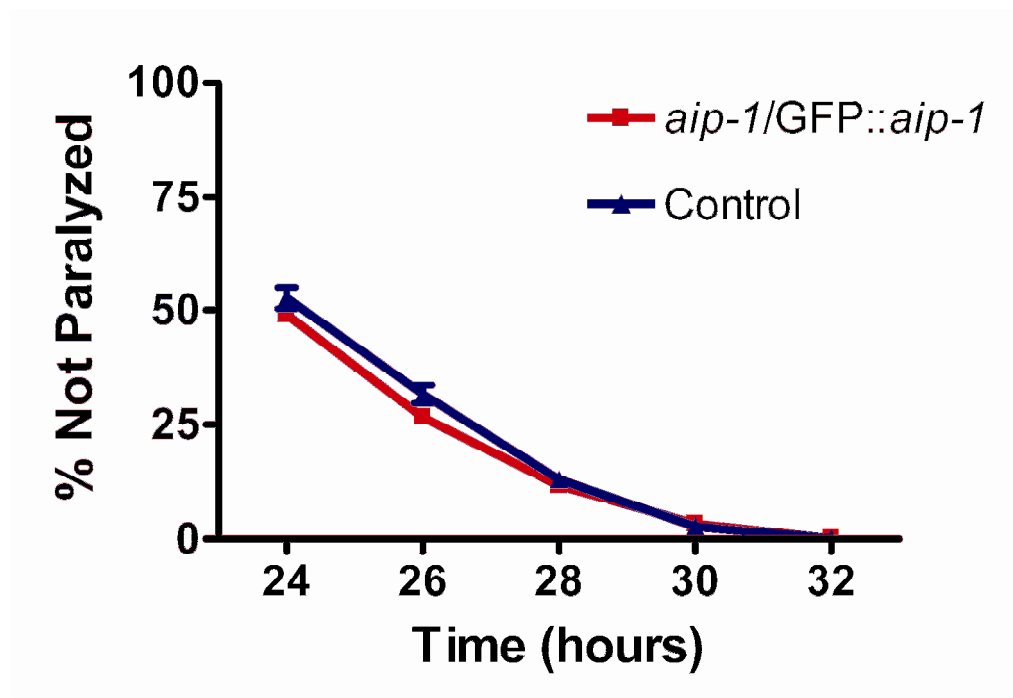


A

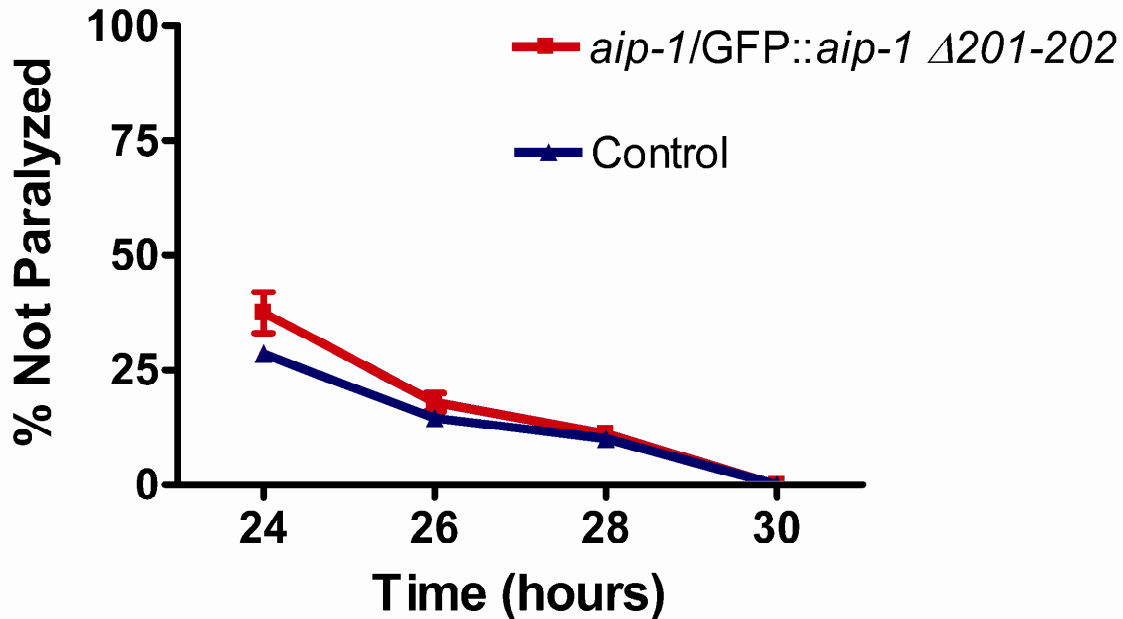


B

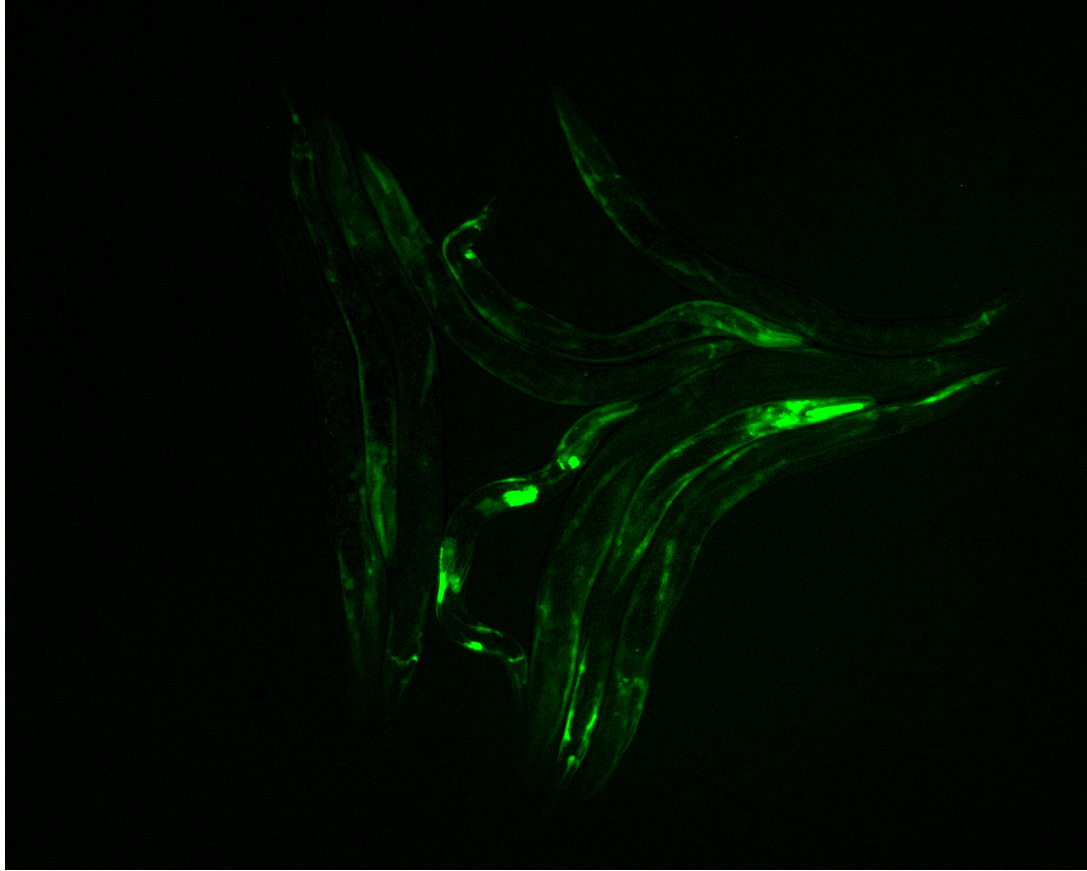


**Figure S1: Overexpression of a GFP::*aip-1* transgene is protective against A $\beta$  toxicity in *Caenorhabditis elegans*.** Animals were grown for 36 hours at 16°C to keep A $\beta$  expression at low levels with no detectable paralysis phenotype. Animals were

then moved to 25°C to induce high levels of A $\beta$  expression and paralysis. The horizontal axis represents the number of hours the animals spent at 25°C. (A) Overexpression of the fusion protein caused a delay in the paralysis phenotype associated with A $\beta$  expression ( $p < 0.0001$  by two-way ANOVA). (B) This protective effect was abrogated by *aip-1*-specific RNAi ( $p = 0.2282$  by two-way ANOVA), which is consistent with AIP-1-specific protection. Error bars represent the standard error of the mean.



**Figure S2: Overexpression of a GFP::*aip-1* $\Delta$ 201-202 transgene fails to protect against A $\beta$  toxicity in *Caenorhabditis elegans*.** Animals were grown for 36 hours at 16°C to keep A $\beta$  expression at low levels with no detectable paralysis phenotype. Animals were then moved to 25°C to induce high levels of A $\beta$  expression and paralysis. The horizontal axis represents the number of hours the animals spent at 25°C. There was no significant difference in the rate of paralysis between animals overexpressing the truncated *aip-1* mutant compared to animals that did not ( $p = 0.02366$  by two-way ANOVA). Error bars represent the standard error of the mean.



**Figure S3: A GFP-tagged AIP-1 $\Delta$ 201-202 is stably expressed in worms.** This result argues against lack of expression or instability of the truncated protein as an explanation for the lack of protection against A $\beta$  toxicity.