

Table S1. shRNA sequences selected for insertion into pSIREN

Subunit	GenBank	Nucleotide sequence	Amino acids
V0-c	M64298.1	³¹¹ CCATCATCCCAGTGGTTAT ³²⁹	¹⁰⁴ SIIPVVM ¹¹⁰
V0-c'=b=f255	NM_033617	²⁵⁵ GGCCTAGCAATTTCTCTGT ²⁷³	⁸⁶ GLAISLS ⁹²
V0-c'=b=f470	NM_033617	⁴⁷⁰ TGGCCATCGAAACTACCAT ⁴⁸⁸	¹⁵⁸ GHRNYHA ¹⁶⁴
V0-c'=b=f661	NM_033617	⁶⁶¹ GGGTCATTGTTGCAATCCT ⁶⁷⁹	²²¹ GVIVAIL ²²⁷
V0-a1	AF218249	³⁴³ CAGGAAGCTCTGAAGAGAA ³⁶¹	¹¹⁵ QEALKRN ¹²¹
V0-a2	AF218252	³⁵⁰ AGCTGAGGAAGAACCTGTT ³⁶⁸	¹¹⁶ KLRKKLR ¹²³
V1-A	NM_007508	⁵¹⁸ GAGGAAGCGTGACTTACAT ⁵³⁶	¹⁷³ RGSVTYI ¹⁷⁹

After transfection, AtT-20 PHM-GFP cells were allowed to recover for 18-48 hours. Based on our experience with neurons expressing pSIREN shRNAs targeted to other transcripts, cells that express readily visible DsRed show sustained knockdown of the target protein (Ma et al., 2008). For the initial experiments with shRNAs targeted to the V0-c, V0-a1, V0-a2 and V1-A subunits of the V-ATPase, many cells expressing DsRed detached from the dish. The shRNAs targeted to the V0-c'=b=f subunit were better tolerated by AtT-20 cells, and all three shRNAs disrupted the cellular morphology in the TGN region to varying extents (Fig. 9).