



SUPPLEMENTARY FIG. S5. AMPA receptor staining. hWJCs transfected with HATH1, siRNA against *HES1* and *HES5*, or a combination of both displayed strong staining for AMPA receptors found on live neurons. Untreated controls displayed no presentation of AMPA receptors. *MATH-1*-transfected cells and cells cotransfected with *MATH-1* and siRNA against *HES1* and *HES5* showed very minor AMPA receptor staining. Nuclei are represented by Hoechst staining (*blue*). Images are composite image montages comprising 49 neighboring fields of view stitched together into a 7×7 image. NP1 (*green*) is a fluorescent probe that binds to active AMPA receptors that have been forced open by exposure to glutamine. NP1 stands for Nanoprobe 1. The images shown are from a pilot study consisting of cells from one umbilical cord ($n=1$). *MATH-1* represents cells transfected with *MATH-1* pDNA. *HATH1* represents cells transfected with *HATH1* pDNA. *H1/H5* represents cells transfected with *HES1* and *HES5* siRNA. *MATH-1/H1/H5* represents cells cotransfected with *MATH-1* pDNA, *HES1* siRNA, and *HES5* siRNA. *HATH1/H1/H5* represents cells cotransfected with *HATH1* pDNA, *HES1* siRNA, and *HES5* siRNA. Scale bar = 500 μm . AMPA, α -amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid.