
Supplementary information

**Human assembloid model of the ascending
neural sensory pathway**

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Human assembloid model of the ascending neural sensory pathway

Ji-il Kim^{1,2,5}, Kent Imaizumi^{1,2,5}, Ovidiu Jurjuț^{1,2}, Kevin W. Kelley^{1,2}, Dong Wang^{1,2},
Mayuri Vijay Thete^{1,2}, Zuzana Hudacova^{1,2}, Neal D. Amin^{1,2}, Rebecca J. Levy³, Grégory
Scherrer⁴,
Sergiu P. Pașca^{1,2*}

¹ Department of Psychiatry and Behavioral Sciences,
Stanford University, Stanford, CA 94305, USA

² Stanford Brain Organogenesis Program, Wu Tsai Neurosciences Institute & Bio-X,
Stanford, CA 94305, USA

³ Department of Neurology & Neurological Sciences, Division of Child Neurology,
Stanford University,
Stanford, CA 94305, USA

⁴ Department of Cell Biology and Physiology, UNC Neuroscience Center, Department of
Pharmacology, The University of North Carolina, Chapel Hill, NC 27599, USA

⁵ These authors contributed equally

* Correspondence to spasca@stanford.edu (S.P.P.)

Supplementary Table 1. hiPS cell lines used in this study.

Supplementary Table 2. Primers used for qPCR experiments.

Supplementary Figure 1. Full Western blot images for the data shown in Fig. 5d.

Supplementary Video 1. Calcium response to $\alpha\beta$ -MeATP exposure in hASA.

Supplementary Video 2. Spontaneous calcium activity in hASA.

Supplementary Video 3. Spontaneous calcium activity in control hASA.

Supplementary Video 4. Spontaneous calcium activity in *SCN9A* KO hASA.

Supplementary Table 1. hiPS cell lines used in this study.

Experiment / Line	1205-4	1208-2	8119-1	KOLF2.1J	0410-1
hSeO single cell RNA seq	O	O	O	O	
hdSpO single cell RNA seq	O	O	O	O	O
qPCR	O	O		O	
hSeO calcium imaging	O	O		O	
Projection imaging	O	O	O		
Rabies tracing + Immunostaining	O	O			
Assembloid calcium imaging	O	O		O	
Assembloid extracellular recording	O	O	O	O	
SCN9A gene editing	O	O		O	

Supplementary Table 2. Primers used for qPCR experiments.

Gene	Forward Primer	Reverse Primer
<i>GAPDH</i>	CATGAGAAGTATGACAACAGCCT	AGTCCTTCCACGATACCAAAGT
<i>POU4F1</i>	CTGCTTTCTTTTGCGGTAGGAC	TGTTTTCGCCCAACATGCAG
<i>SIX1</i>	CTGCCGTCGTTTGGCTTTAC	GCTCTCGTTCTTGTGCAGGT
<i>TACR1</i>	CTAACACCTCGGAACCCAATC	CCACAATGACCGTGTAGGCAG
<i>LBX1</i>	CTCCAACAAGCCACTGACG	GCACAGCGAGTAACTTCTCCG
<i>SCN9A</i>	CCTCAGAGCTTTGTCCATTTC	TTGTCTGCATAGTAGGGGTCC

Supplementary Figure 1. Full western blots of the image shown in Figure 5d. Blots include an additional unmodified control line (KOLF2.1J), which did not have a matched KO and was not quantified in Figure 5d.

