

**File Name: Supplementary Data 1**

Description: Clinical findings in individuals with EZH1 mutations. NR=Not Reported. NICU=Neonatal Intensive Care Unit. IVH=Intraventricular Hemorrhage. OCD=Obsessive Compulsive Disorder. CT=Computerized tomography. VLP=Variant of Low Pathogenic score. EEG=Electroencephalogram

**File Name: Supplementary Data 2**

Description: Differentially expressed genes in EZH1<sup>-/-</sup> vs EZH1<sup>+/+</sup> 2-month-old hPSC derived neurons.

**File Name: Supplementary Data 3**

Description: Differentially expressed genes in EZH1<sup>+/G</sup> vs EZH1<sup>+/+</sup> 2-month-old hPSC derived neurons.