Micro dissection of adult mouse brain SVZ: The mice brain was dissected and removed following euthanasia and kept in a sterile petri dish containing sterile PBS. The petri dish containing the individual brain was placed under a dissecting microscope with light source at low magnification on the ventral surface and using fine forceps, the olfactory bulbs were removed by holding the cerebellum. The brain was then rotated on to the dorsal aspect and using a sterile blade a coronal cut was made at the level of the optic chiasm. To micro dissect the SVZ, the rostral portion of the brain was positioned to face the cut coronal section upwards. The microscope was focused to a higher magnification. The septum was discarded using fine curved forceps. The SVZ (thin tissue layer adjacent to the ventricle) was dissected by placing the tip of a fine curved forceps in the lateral corner of the ventricle adjacent to the corpus callosum and the other tip approximately 1 mm into the tissue immediately adjacent to the ventricle. The tissue was gently pressed down with the forceps and the triangular piece of tissue removed. The dissected SVZ was placed on a petri dish on ice. A total of 5-10 mice SVZ regions per genotype were pooled in each isolation.