

Supplementary table. Cell groups and associations to Markram et al. (2015) cell groups in the step 2 microcircuit. Inhibitory groups marked with italics are divided both to BC and MC groups in the layer, in relation to the number of cells in the BC/MC groups. L = layer, I = Inhibitory, PC = Pyramidal cell, BC = Basket cell, MC = Martinotti cell, SS = Spiny stellate cell. DAC = Descending Axon Cell, HAC = Horizontal Axon Cell, LAC = Large Axon Cell, NGC-SA = Neurogliaform Cell with slender axonal arborization, NGC-DA = Neurogliaform Cell with dense axonal arborization, SAC = Small Axon Cell, LBC = Large Basket Cell, NBC = Nest Basket Cell, SBC = Small Basket Cell, DBC = Double Bouquet Cell, BP = Bipolar Cell, ChC = Chandelier Cell, NGC = Neurogliaform Cell, BTC = Bitufted Cell, SP = Star Pyramidal Cell, STPC = Slender-tufted Pyramidal Cell, UTPC = Untufted Pyramidal Cell, TTPC1 = Thick-tufted Pyramidal Cell with a late bifurcating apical tuft, TTPC2 = Thick-tufted Pyramidal Cell with an early bifurcating apical tuft, TPC_L4 Tufted Pyramidal Cell with dendritic tuft terminating in layer 4, IPC = Pyramidal Cell with inverted apical-like dendrites, BPC = Pyramidal Cell with bipolar apical-like dendrites, TPC_L1 = Tufted Pyramidal Cell with dendritic tuft terminating in layer 1.

N	N cells	Name	Markram cell types
1	338	L1_I	L1_DAC, L1_HAC, L1_LAC, L1_NGC-SA, L1_NGC-DA, L1_SAC
2	5877	L23_PC	L23_PC
3	1198	L23_BC	L23_LBC, L23_NBC, L23_SBC, <i>L23_DBC</i> , <i>L23_BP</i> , <i>L23_ChC</i> , <i>L23_NGC</i> , <i>L23_BTC</i>
4	425	L23_MC	L23_MC, <i>L23_DBC</i> , <i>L23_BP</i> , <i>L23_ChC</i> , <i>L23_NGC</i> , <i>L23_BTC</i>
5	2674	L4_PC1	L4_PC
6	1098	L4_PC2	L4_SP
7	406	L4_SS	L4_SS
8	329	L4_BC	L4_LBC, L4_NBC, L4_SBC, <i>L4_BTC</i> , <i>L4_NGC</i> , <i>L4_ChC</i> , <i>L4_BP</i> , <i>L4_DBC</i>
9	137	L4_MC	L4_MC, <i>L4_BTC</i> , <i>L4_NGC</i> , <i>L4_ChC</i> , <i>L4_BP</i> , <i>L4_DBC</i>
10	5050	L5_PC	L5_STPC, L5_UTPC, L5_TTPC1, L5_TTPC2
11	558	L5_BC	L5_LBC, L5_SBC, L5_NBC, L5_NGC, <i>L5_DBC</i> , <i>L5_BTC</i> , <i>L5_BP</i> , <i>L5_ChC</i>
12	491	L5_MC	L5_MC, <i>L5_NGC</i> , <i>L5_DBC</i> , <i>L5_BTC</i> , <i>L5_BP</i> , <i>L5_ChC</i>
13	3476	L6_PC1	L6_IPC
14	3175	L6_PC2	L6_TPC_L4, L6_UTPC
15	4811	L6_PC3	L6_TPC_L1, L6_BPC
16	813	L6_BC	L6_SBC, L6_NBC, L6_LBC, <i>L6_ChC</i> , <i>L6_DBC</i> , <i>L6_NGC</i> , <i>L6_BTC</i> , <i>L6_BP</i>
17	372	L6_MC	L6_MC, <i>L6_ChC</i> , <i>L6_DBC</i> , <i>L6_NGC</i> , <i>L6_BTC</i> , <i>L6_BP</i>