|  |  |  |  |
| --- | --- | --- | --- |
| **Mouse Gene** | **Zebrafish Gene** | **Mammalian Expression** | **References** |
| Dlx1 | dlx1a | Subpallium; delineates pallio-subpallial boundary | 1 |
| Dlx2 | dlx2a, dlx2b | Subpallium; delineates pallio-subpallial boundary | 1; 2 |
| Dlx5 | dlx5a | Subpallium; delineates pallio-subpallial boundary | 1; 3 |
| Dlx6 | dlx6a | Subpallium; delineates pallio-subpallial boundary | 3 |
| Tbr1 | tbr1b | Pallium; delineates pallio-subpallial boundary | 2 |
| Neurod1 | neurod1 | Pallium; delineates pallio-subpallial boundary | 4; 5 |
| Nkx2.1 | nkx2.1 | Medial ganglionic eminence; specifies interneurons towards an MGE fate; required for cholinergic neuron development | 6-9 |
| Lhx6 | lhx6 | Required for development of somatostatin+ and parvalbumin+ interneurons | 8; 10; 11 |
| Sst | sst1.1 | Somatostatin+ interneurons | 12 |
| Npy | npy | Neuropeptide Y+ interneurons | 12 |
| Sox6 | sox6 | Somatostatin+ and parvalbumin+ interneurons; downstream of Lhx6 | 13; 14 |
| Etv1 (Er81) | etv1 | Parvalbumin+ basket cells | 15; 16 |
| Nxph1 | nxph1 | Medial ganglionic eminence-derived interneurons | 17; 18 |
| Pvalb | pvalb6, pvalb7 | Parvalbumin+ interneurons | 14 |
| Lhx8 | lhx8a | Forebrain cholinergic neurons | 19-22 |
| Gbx1 | gbx1 | Forebrain cholinergic neurons; ventral pallidum; globus pallidus | 19; 18 |
| Calb1 | calb1 | Calbindin+ interneurons | 23 |
| Isl1 | isl1 | Basal ganglia and septum; forebrain cholinergic neurons | 24-27; 22 |
| Zic1 | zic1 | Septum | 28; 29 |
| Zic2 | zic2a | Septum | 30; 29; 31 |
| Zic4 | zic4 | Septum | 32; 33; 29 |
| Zic5 | zic5 | Septum | 29; 18 |
| Slc17a6 | slc17a6a, slc17a6b | Glutamatergic neurons | 34 |
| Slc32a1 | slc32a1 | GABAergic neurons | 35 |
| Slc6a1 | slc6a1b | GABAergic neurons | 36 |
| Gad1 | gad1b | GABAergic neurons | 37 |
| Gad2 | gad2 | GABAergic neurons | 37 |
| Tac1 | tac1 | Medium spiny neurons | 38; 39 |
| Sp8 | sp8a | Medium spiny neurons | 40 |
| Synpr | synpr | Medium spiny neurons | 41; 42 |
| Pyy | pyya, pyyb | Peptide YY; murine medulla | 43; 44 |
| Penk | penkb | Medium spiny neurons | 38; 39 |
| Six3 | six3b | Medium spiny neurons | 40; 45 |
| Cxcl14 | cxcl14 | Medium spiny neurons | 41; 42 |
| Foxp1 | foxp1b | Medium spiny neurons | 41; 46 |
| Rgs4 | rgs4 | Multiple locations including cortex, hippocampus, and striatum | 47; 48 |
| Ncald | ncaldb | Multiple locations | 29; 49 |
| Gm34066 | c16h2orf66 | Uncharacterized |  |
| Prdm12 | prdm12b | Postmitotic neurons in E12.5 septum, striatum, and pallio-subpallial boundary | 50; 51 |
|  | si:ch73-386o14.1 | Uncharacterized |  |
| Gfra2 | gfra2b | Multiple locations | 52; 29 |
| Drd2 | drd2b | D2 dopamine receptor | 53 |
| Nr2f2 (COUP-TFII) | nr2f2 | Interneurons derived from caudal ganglionic eminence | 54 |
| Prox1 | prox1a, prox1b | Interneurons derived from lateral and caudal ganglionic eminences | 55 |
| Calb2 | calb2a, calb2b | Calretinin+ interneurons | 56 |
| Vip | vip | Vasoactive intestinal polypeptide+ interneurons | 57 |
| Lhx9 | lhx9 | Medial pallium; ventral pallium | 58 |
| Lhx2 | lhx2b | Medial pallium; dorsal pallium; lateral pallium; ventral pallium | 58 |
| Lhx5 | lhx5 | Cajal-Retzius cells; pallial septum | 59; 58 |
| Lhx1 | lhx1a | Cajal-Retzius cells; pallial septum | 60; 59 |
| Otp | otpa | Hypothalamic neuroendocrine neurons; medial extended amygdala neurons | 61; 62 |
| Fezf1 | fezf1 | Prethalamus; olfactory bulb; ventrolateral pallium | 63; 64 |
| Pdyn | pdyn | Striatum; pallidum; hypothalamus | 65; 29 |
| Emx2 | emx2 | Developing pallium; cortex | 66; 67 |
| Eomes | eomesa | Hippocampus; olfactory bulb; neuroblasts | 68; 69 |
| Gfra1 | gfra1a | Medial habenula; dentate gyrus | 65 |
| Emx1 | emx1 | Developing pallium; cortex | 66; 67 |
| Rprm | rprma | Subiculum, piriform area, postpiriform transition area, piriform-amygdalar area, lateral amygdalar nucleus | 65 |
| Rspo2 | rspo2 | Basolateral amygdala; entorhinal cortex; subiculum | 65; 70; 29 |
| Cbln1 | cbln1 | Subiculum; entorhinal cortex | 65; 71; 29 |
| Tshz1 | tshz1 | Amygdalar intercalated cells; accessory olfactory bulb; striatum | 65; 72; 29 |
|  | emx3 |  |  |
| Efna1 | efna1b | Subiculum; dentate gyrus; amygdala | 65; 29 |
| Ptp4a3 | PTP4A3 (1 of many) | Isocortex; hippocampus; amygdala; striatum | 29; 73 |
| Cpne4 | cpne4a | Piriform cortex; hippocampus | 29; 73 |
| Cplx1 | cplx2l | Isocortex; hippocampus; amygdala | 29 |
| Ctgf | ctgfa | Isocortex | 29 |
| Bcl2l13 | bc2l13 | Isocortex; hippocampus; amygdala; neural progenitor cells | 74; 29 |
| Zfp536 | znf536 | Piriform cortex; anterior olfactory nucleus | 65; 29 |
| Ccdc136 | ccdc136a | Isocortex; hippocampus | 29 |
| Fam43b | fam43b | Isocortex; hippocampus | 29; 75 |
| Nell2 | nell2b | Isocortex; hippocampus; amygdala | 65 |
| Olfm1 | olfm1a | Isocortex; hippocampus | 29 |
| Cdh8 | cdh8 | Isocortex; hippocampus | 29 |
| Atp1a3 | atp1a3b | Isocortex; hippocampus | 29 |
| C1ql3 | c1ql3b.1 | Isocortex; hippocampus; basolateral amygdala | 76; 29; 77 |
| Nptx1 | nptx1l | Isocortex; CA3; basolateral amygdala | 65; 29; 77 |
| Neurod6 | neurod6a | CA1; CA2; CA3; dentate gyrus; subiculum | 65; 29 |
| Fndc5 | fndc5b | Olfactory bulb; CA1; CA3 | 65 |
| Chga | chga | Entorhinal area; subiculum; piriform area; basolateral amygdala; isocortex | 65 |
| Jun | jun | Ubiquitous | 65; 29 |
| Rtn4rl2 | rtn4rl2a, rtn4rl2b | Isocortex; CA1; CA3 | 65; 29 |
| Eif4ebp3 | eif4ebp3l | Accessory olfactory bulb; nucleus of the lateral olfactory tract | 65; 29 |
| Ucn | uts1 | Entorhinal area; nucleus of the lateral olfactory tract | 65 |
| Snap25 | snap25b | Isocortex; subiculum; entorhinal area | 65 |

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