Figure 3—source data 3

**Density of *Vipr1* expressing cells in the mouse brain: analysis of *Slc32a1* co-expression and comparison with data from Allen Brain Atlas**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Abbreviationa | Structurea | Density  Allenb | Density RNAscope | % of *Slc32a1*  (+) | % of *Slc32a1*  (-) |
| Cortical plate | | | | | |
| Alv | Alveus | n.o. | + | n.o. | + |
| AOB | accessory olfactory bulb | + | n.o. | - | - |
| MOB | main olfactory bulb | + | n.o. | - | - |
| NLOT | nucleus of the lateral olfactory tract | + | n.o. | - | - |
| PRE | presubiculum | + | n.o. | - | - |
| ACAL5 | anterior cingulate area, dorsal part, layer 5 | ++ | + | n.o. | + |
| CA2v | ventral hippocampus, CA2 | ++ | n.o. | - | - |
| CA2d | dorsal hippocampus, CA2 | ++ | + | + | - |
| CA1d | dorsal hppocampus CA1 | ++ | + | + | n.o. |
| CA3d | dorsal hippocampus, CA3 | ++ | + | + | + |
| COAa | cortical amygdala anterior part | ++ | ++ | + | + |
| dDG-sg | Dorsal dentate gyrus, granule cell layer | ++ | ++ | ++ | n.o. |
| DH | dorsal hippocampus proper | ++ | n.o. | - | - |
| ENTm | entorhinal area, medial part | ++ | n.o. | - | - |
| PAA | piriform-amygdalar area | ++ | n.o. | - | - |
| POST | postsubiculum | ++ | n.o. | - | - |
| vHilus | ventral hilus | ++ | ++ | + | + |
| ACAd1 | anterior cingulate area, dorsal layer 1 | +++ | n.o. | - | - |
| AI | agranular insular area | +++ | n.o. | - | - |
| AON | anterior olfactory nucleus | +++ | n.o. | - | - |
| AUD L2/3 | Auditory cortex, layer 2/3 | +++ | +++ | + | ++ |
| CA3v | field CA3, ventral | +++ | +++ | + | ++ |
| CA3vv | hippocampal formation, ventral CA3c | +++ | +++ | + | ++ |
| vDG-sg | Ventral dentate gyrus, granule cell layer | +++ | +++ | + | ++ |
| ECT | ectorhinal area | +++ | ++++ | + | +++ |
| ENTl | entorhinal area, lateral part | +++ | n.o. | - | - |
| GU | gustatory areas | +++ | ++ | + | + |
| ILA | infralimbic area | +++ | n.o. | - | - |
| MO L2/3 | Motor area | +++ | + | n.o. | + |
| ORB | orbital area | +++ | n.o. | - | - |
| PAR | parasubiculum | +++ | n.o. | - | - |
| PL | prelimbic area | +++ | n.o. | - | - |
| RSP | retrosplenial area | +++ | n.o. | - | - |
| SS | somatosensory areas | +++ | ++ | + | + |
| SUB | subiculum | +++ | +++ | + | ++ |
| PIR | piriform area | ++++ | +++ | + | ++ |
| PTLp | posterior parietal association areas | ++++ | n.o. | - | - |
| TR | postpiriform transition area | ++++ | n.o. | - | - |
| TT | taenia tecta | ++++ | n.o. | - | - |
| TTv | taenia tecta ventral | ++++ | n.o. | - | - |
| VIS | visual areas | ++++ | +++ | + | ++ |
| VISC | visceral area | ++++ | n.o. | - | - |
| Cortical subplate | | | | | |
| LA | lateral amygdalar nucleus | ++ | n.o. | - | - |
| BLA | basolateral amygdalar nucleus | +++ | + | + | n.o. |
| BMA | basomedial amygdalar nucleus | +++ | n.o. | - | - |
| CLA | claustrum | +++ | +++ | + | ++ |
| PA | posterior amygdalar nucleus | +++ | ++ | + | + |
| Epd | endopiriform nucleus | ++++ | n.o. | - | - |
| Cerebral nuclei | | | | | |
| BSTov | bed nucleus of stria terminalis, oval nucleus | n.o. | ++ | ++ | n.o. |
| LSr | lateral septal nucleus rostral | n.o. | +++ | + | ++ |
| AAA | anterior amygdalar area | + | n.o. | - | - |
| CEAc | central amygdalar nucleus, | + | + | + | n.o. |
| IA | intercalated amygdalar nucleus | + | n.o. | - | - |
| Isl | Islands of Calleja | + | ++ | n.o. | ++ |
| MEA | medial amydgala, anterodorsal part | + | n.o. | - | - |
| NDB | diagonal band nucleus | + | n.o. | - | - |
| SI | substantia innominata | + | n.o. | - | - |
| ACB | nucleus accubens | ++ | ++ | n.o. | ++ |
| CP | caudoputamen | ++ | +++ | n.o. | +++ |
| FS | fundus of striatum | ++ | n.o. | - | - |
| OT | olfactory tubercle | ++ | ++++ | +++ | + |
| Interbrain | | | | | |
| RT | reticular nucleus of the thalamus | n.o. | + | n.o. | + |
| AD | anterodorsal nucleus of the thalamus | + | n.o. | - | - |
| AV | anteroventral nucleus of the thalamus | + | n.o. | - | - |
| LH | lateral habenula | + | n.o. | - | - |
| PVT | paraventricular nucleus of the thalamus | + | n.o. | - | - |
| Hypothalamus | | | | | |
| ARH | Arcuate hypothalamic nucleus | n.o. | + | + | n.o. |
| SUM | supramammilary nucleus | n.o. | + | + | n.o. |
| VMH | ventromedial hypothalamic nucleus | n.o. | + | n.o. | + |
| ZI | zona incerta | n.o. | + | + | n.o. |
| PH | posterior hypothalamic nucleus | + | n.o. | - | - |
| PM | premammilary nucleus | + | n.o. | - | - |
| SCH | suprachiasmatic nucleus | + | n.o. | - | - |
| SO | supraoptic nucleus | + | n.o. | - | - |
| Midbrain | | | | | |
| SNr | substantia nigra reticulata | - | ++ | ++ | n.o. |
| PBG | parabigeminal nucleus | + | n.o. | - | - |
| RL | rostral linear nucleus raphe | + | +++ | +++ | - |
| Hindbrain | | | | | |
| PCG | pontine central grey | n.o. | ++ | ++ | n.o. |
| POR | Superior olivary complex, periolivary region | n.o. | + | + | n.o. |
| rV | trigeminal reticular nucleus | n.o. | n.o. | - | - |
| LC | locus coeruleus | + | n.o. | - | - |
| PG | pontine grey | + | n.o. | - | - |
| Medulla | | | | | |
| NTB | Nucleus of the trapezoid body | n.o. | ++ | ++ | n.o. |
| VII | Facial motor nucleus | n.o. | ++ | ++ | n.o. |
| NTS | nucleus of the tractus solitarius | + | n.o. | - | - |
| Cerebellum | | | | | |
| CENT | Central lobule of cerebellum | n.o. | + | n.o. | + |
| CBgcl | granular layer of cerebellum | + | n.o. | - | - |
| CBpj | Purkinje cell layer of cerebellum | + | ++++ | ++++ | - |
| FLgr | cerebellar cortex, flocculus | + | + | + | n.o. |

Density is reported in a semiquantitative way depending on the percentage of the Nissl stained nuclei expressing VipR2 mRNA: for 76%-100% (++++), for 51% -75% (+++), for 26% - 50% (++), for 1% 25% (+) and when there was no expression (-). In the cases where it was not possible to observe the region it was indicated as (n.o).

"a" Nomenclature, abbreviatures and functional classification are based on the Allen Mouse Brain Atlas.

"b" Evaluation of the VipR1 mRNA density through all the coronal and sagittal sections of the Allen ISH experiments 73927619 and 77924538. Density was reported in a semiquantitative way depending on the percentage of the Nissl stained nuclei expressing VipR2 mRNA, i.e: (++++) for 76%-100% , (+++) for 51% -75%, (++) for 26% - 50%, (+) for 1% 25%.

"n.o": no signal observed

"-": not applicable