

TABLE 15-1. Distribution of Interneuron Types across Hippocampal Areas and Some Molecules That in Combination Are Useful for Their Grouping and/or Recognition

| <i>GABAergic Interneuron</i> | | | | | | | |
|--|------------|--------------------------------|---|------------|------------|----------------------|-----------------------|
| <i>Group</i> | <i>No.</i> | <i>Suggested Name (1)</i> | <i>Localized Proteins Useful for Recognition (2, 3)</i> | <i>CA1</i> | <i>CA3</i> | <i>Dentate Gyrus</i> | <i>To Mossy Cells</i> |
| Soma, perisomatic innervating cells | 1 | Axo-axonic | Parvalbumin, sd, a; GABA-A-R-a1 low, sdm | P | P | P | P |
| | 2 | Basket | Parvalbumin, sd, a; GABA-A-R-a1 high, sdm | P | P | P | not |
| | 3 | Basket | CCK, s, a; VIP, s, a; CB1, a | P | P | P | P |
| | 4 | Basket | CCK, s, a; VGLUT3, a; CB1, a | P | P | P | P |
| Stratum radiatum and oriens innervating cells | 5 | Bistratified | Parvalbumin, sd SM, s, a; NPY s, a | P | NP | ? | ? |
| | 6 | Ivy | nNOS, sd, a; NPY, s, a GABA-A-R-a1, sdm | P | P | ? | ? |
| | 7 | Schaffer collateral-associated | CCK, s, a; calbindin, s; CB1, a | P | ? | NA | NA |
| | 8 | Apical dendrite innervating | CCK, s, a; VGLUT3, a; CB1, a | P | ? | NA | NA |
| | 9 | Large calbindin | Calbindin, sd, a | P | ? | ? | ? |
| | 10 | Cholinergic | ChAT, sd, a; vAChT, a | P | P | ? | ? |
| Stratum lacunosum moleculare innervating cells | 11 | O-LM | Parvalbumin, sd, a, SM, s, a; mGluR1a strong, sdm mGluR7a, IT | P | P | P, HIPP (4) | ? |
| | 12 | Perforant path associated | CCK, s, a; calbindin, s; CB1, a | P | NP | NP, MOPP (5) | NA |
| | 13 | Neurogliaform | NPY, s; nNOS, s; alpha-actinin-2, s | P | P | NP | ? |
| Projection cells | 14 | Radiatum retrohippocampal | M2 receptor, sdm; mGluR1a weak, sdm | P | ? | ? | ? |
| | 15 | Trilaminar | M2 receptor strong, sdm; mGluR8a, IT | P | P | ? | ? |