

## Commonly used antibodies for IF and conjugate array tomography (in mouse and human tissue)

These antibodies perform well with both formaldehyde fixation and with a combination of formaldehyde and glutaraldehyde, except few that require glutaraldehyde in the fixative (\*). The antibodies have been validated in both mouse and human biopsy brain tissue, except where indicated (\*\*). RRID, Research Resource Identifier.

| Antigen                  | Host       | Antibody Source                 | Dilution | RRID        |
|--------------------------|------------|---------------------------------|----------|-------------|
| <i>Neurotransmitters</i> |            |                                 |          |             |
| GABA*                    | Guinea pig | Millipore AB175                 | 1:5000   | AB_91011    |
| GABA*                    | Rabbit     | Millipore AB131                 | 1:10000  | AB_2278931  |
| Glutamate*               | Rabbit     | Millipore AB5018                | 1:100    | AB_91640    |
| <i>Synaptic</i>          |            |                                 |          |             |
| Synapsin 1               | Rabbit     | Cell Signaling 5297             | 1:500    | AB_2616578  |
| Synapsin 1/2             | Chicken    | Synaptic Systems 106 006        | 1:100    | AB_2622240  |
| Synaptophysin            | Mouse      | Abcam ab8049                    | 1:50     | AB_2198854  |
| PSD95                    | Rabbit     | Cell Signaling 3450             | 1:200    | AB_2292883  |
| PSD95                    | Mouse      | NeuroMab 75-348, clone K28/74   | 1:100    | AB_2315909  |
| Homer1                   | Mouse      | NeuroMab 75-454, clone L113/130 | 1:50     | AB_2877198  |
| VGluT1                   | Guinea pig | Millipore AB5905                | 1:5000   | AB_2301751  |
| VGluT2                   | Rabbit     | Synaptic systems 135 403        | 1:100    | AB_887883   |
| GAD2                     | Rabbit     | Cell Signaling 5843             | 1:200    | AB_10835855 |
| Gephyrin                 | Mouse      | NeuroMab 75-465, clone L106/4   | 1:100    | AB_2716264  |
| Clathrin**               | Rabbit     | Cell Signaling 4796             | 1:100    | AB_10557412 |
| <i>Cell type markers</i> |            |                                 |          |             |
| Parvalbumin              | Rabbit     | SWANT PV28                      | 1:300    | AB_10013386 |
| Calbindin**              | Rabbit     | Millipore AB1778                | 1:50     | AB_2068336  |
| Calbindin                | Mouse      | NeuroMab 75-448, clone L109/57  | 1:100    | AB_2686913  |
| NPY                      | Mouse      | NeuroMab 75-456, clone L115/13  | 1:100    | AB_2877570  |
| nNOS                     | Mouse      | NeuroMab 73-480, clone L121/25  | 1:2      | AB_2651159  |
| Tryptophan hydroxylase** | Sheep      | Millipore, AB1541               | 1:200    | AB_90754    |
| Tyrosine hydroxylase     | Rabbit     | Millipore AB152                 | 1:200    | AB_390204   |
| <i>Receptors</i>         |            |                                 |          |             |
| GluA1                    | Rabbit     | Millipore #AB1504               | 1:100    | AB_2113602  |
| GluA2                    | Rabbit     | Abcam ab206293                  | 1:50     | AB_2800401  |
| GluA2/3                  | Rabbit     | Millipore AB1506                | 1:100    | AB_90710    |
| GluA3                    | Mouse      | Millipore MAB5416               | 1:1000   | AB_2113897  |

|                               |         |                               |       |             |
|-------------------------------|---------|-------------------------------|-------|-------------|
| GluA4                         | Rabbit  | Cell Signaling 8070           | 1:50  | AB_10829469 |
| GluN1                         | Mouse   | Synaptic systems 114 011      | 1:500 | AB_887750   |
| GluN2B                        | Mouse   | NeuroMab 75-101, clone N59/36 | 1:500 | AB_2232584  |
| GABA A Receptor $\beta$ 2/3** | Mouse   | Millipore MAB341              | 1:100 | AB_2109419  |
| <b><i>Cytoskeletal</i></b>    |         |                               |       |             |
| $\alpha$ Tubulin              | Rabbit  | Abcam ab18251                 | 1:200 | AB_2210057  |
| Acetylated $\alpha$ tubulin   | Mouse   | Sigma T6793                   | 1:100 | AB_477585   |
| $\beta$ III Tubulin**         | Chicken | Abcam ab41489                 | 1:100 | AB_727049   |
| Detyrosinated tubulin**       | Rabbit  | Millipore AB3201              | 1:100 | AB_177350   |
| $\delta$ 2 Tubulin**          | Rabbit  | Millipore AB3203              | 1:100 | AB_177351   |
| Neurofilament 200             | Rabbit  | Sigma N4142                   | 1:100 | AB_477272   |
| Neurofilament, heavy chain    | Chicken | AVES NF-H                     | 1:100 | AB_2313552  |
| Neurofilament, light chain**  | Chicken | AVES NF-L                     | 1:100 | AB_2313553  |
| $\gamma$ actin                | Mouse   | Sigma A8481                   | 1:100 | AB_2289264  |
| Synaptopodin**                | Rabbit  | Synaptic Systems 163 002      | 1:500 | AB_887825   |
| <b><i>Glial</i></b>           |         |                               |       |             |
| Glutamine Synthetase          | Mouse   | BD Biosciences 610517         | 1:25  | AB_397879   |
| GFAP                          | Chicken | AVES GFAP                     | 1:100 | AB_2313547  |
| <b><i>Myelin</i></b>          |         |                               |       |             |
| MBP                           | Chicken | AVES MBP                      | 1:100 | AB_2313550  |
| PLP                           | Chicken | AVES PLP                      | 1:100 | AB_2313560  |
| CNPase                        | Chicken | AVES CNP                      | 1:100 | AB_2313538  |
| <b><i>Ion channels</i></b>    |         |                               |       |             |
| Kv1.1**                       | Mouse   | NeuroMab 75-105, clone K36/15 | 1:100 | AB_2128566  |
| Kv1.2**                       | Mouse   | NeuroMab 75-008, clone K14/16 | 1:100 | AB_2296313  |
| Kv2.1**                       | Mouse   | NeuroMab 75-014, clone K89/34 | 1:100 | AB_10673392 |
| <b><i>Mitochondria</i></b>    |         |                               |       |             |
| MDH2                          | Rabbit  | Origene TA308153              | 1:200 | AB_2722674  |
| TOMM20                        | Rabbit  | Abcam ab78547                 | 1:100 | AB_2043078  |
| VDAC                          | Rabbit  | ProteinTech 10866-1-AP        | 1:50  | AB_2257153  |
| <b><i>Other</i></b>           |         |                               |       |             |
| Laminin**                     | Rabbit  | Sigma L9393                   | 1:25  | AB_477163   |
| Caspr**                       | Mouse   | NeuroMab 75-001, clone K65/35 | 1:100 | AB_2083496  |
| GFP                           | Chicken | GeneTex GTX13970              | 1:100 | AB_371416   |
| GFP                           | Mouse   | NeuroMab 75-131, clone N86/8  | 1:100 | AB_10671445 |

\*Require glutaraldehyde in the fixative

\*\*Not tested in human