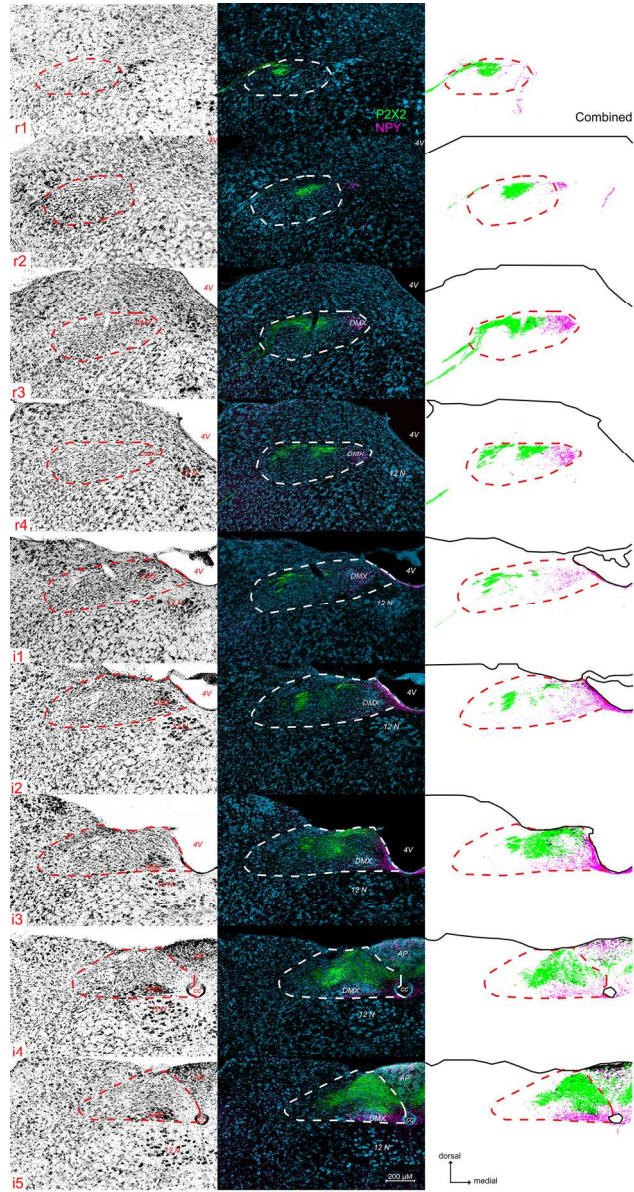
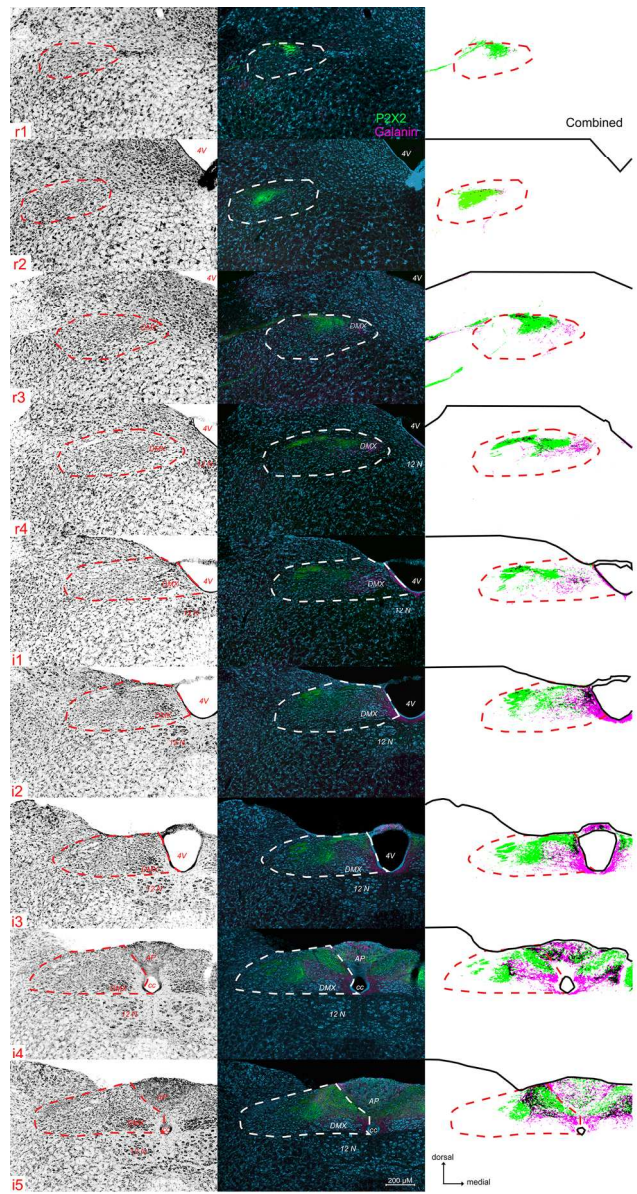


118x230mm (300 x 300 DPI)

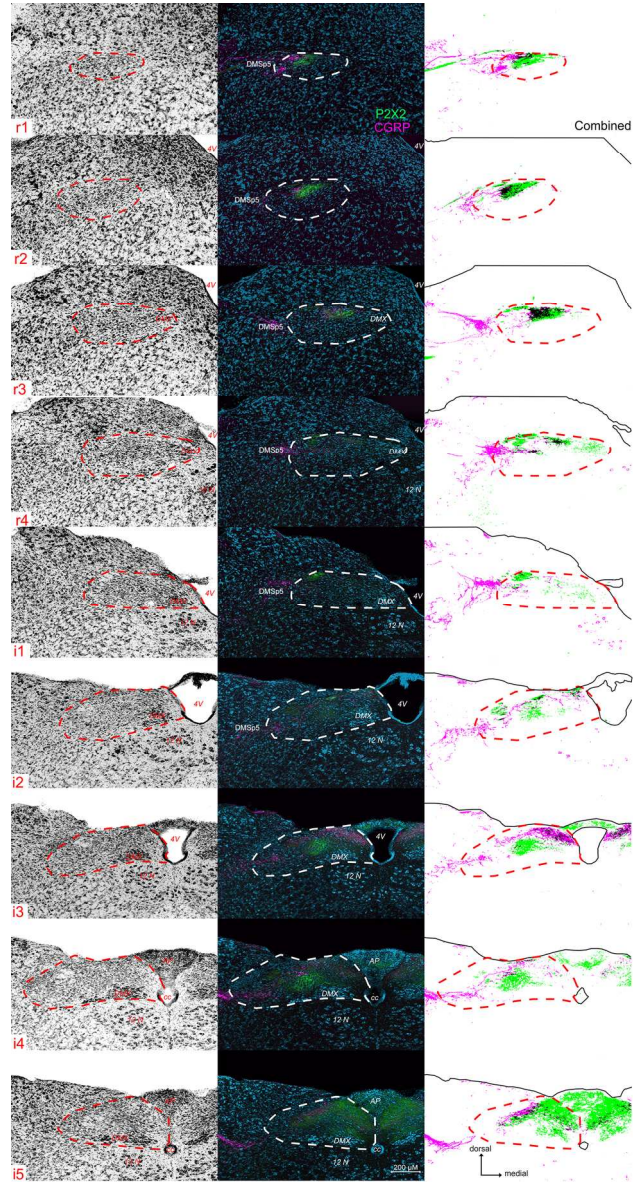


120x230mm (300 x 300 DPI)





120x230mm (300 x 300 DPI)



120x230mm (300 x 300 DPI)

## Supplemental Figure Legends

**S1. P2X<sub>2</sub> (green) and ChAT (magenta) immunoreactivity across all nine representative nTS levels (r1 – r4; i1 – i5).** For each nTS level shown, left: photomicrographs of fluorescent Nissl staining inverted to appear similar to chromogenic staining; middle: photomicrographs of P2X<sub>2</sub> (green) and ChAT (magenta) immunoreactivity; right: spatial maps of P2X<sub>2</sub> and ChAT. Each map represents immunoreactivity for each stain that was greater than 2 S.D. of background staining (see *Methods* for more details). Left and right: nTS boundaries denoted by red dotted lines; middle: nTS boundaries denoted by white dotted lines.

**S2. P2X<sub>2</sub> (green) and NPY (magenta) immunoreactivity all nine representative nTS levels (r1 – r4; i1 – i5).** For each nTS level shown, left: photomicrographs of fluorescent Nissl staining inverted to appear similar to chromogenic staining; middle: photomicrographs of P2X<sub>2</sub> (green) and NPY (magenta) immunoreactivity; right: spatial maps of P2X<sub>2</sub> and NPY. Each map represents immunoreactivity for each stain that was greater than 2 S.D. of background staining (see *Methods* for more details). Left and right: nTS boundaries denoted by red dotted lines; middle: nTS boundaries denoted by white dotted lines.

**S3. P2X<sub>2</sub> (green) and galanin (magenta) immunoreactivity all nine representative nTS levels (r1 – r4; i1 – i5).** For each nTS level shown, left: photomicrographs of fluorescent Nissl staining inverted to appear similar to chromogenic staining; middle: photomicrographs of P2X<sub>2</sub> (green) and galanin (magenta) immunoreactivity; right:

spatial maps of P2X<sub>2</sub> and galanin. Each map represents immunoreactivity for each stain that was greater than 2 S.D. of background staining (see *Methods* for more details). Left and right: nTS boundaries denoted by red dotted lines; middle: nTS boundaries denoted by white dotted lines.

**S4. P2X<sub>2</sub> (green) and CGRP (magenta) immunoreactivity all nine representative nTS levels (r1 – r4; i1 – i5.** For each nTS level shown, left: photomicrographs of fluorescent Nissl staining inverted to appear similar to chromogenic staining; middle: photomicrographs of P2X<sub>2</sub> (green) and CGRP (magenta) immunoreactivity; right: spatial maps of P2X<sub>2</sub> and CGRP. Each map represents immunoreactivity for each stim that was greater than 2 S.D. of background staining (see *Methods* for more details). Left and right: nTS boundaries denoted by red dotted lines; middle: nTS boundaries denoted by white dotted lines.