

## Supplemental Digital Content 1

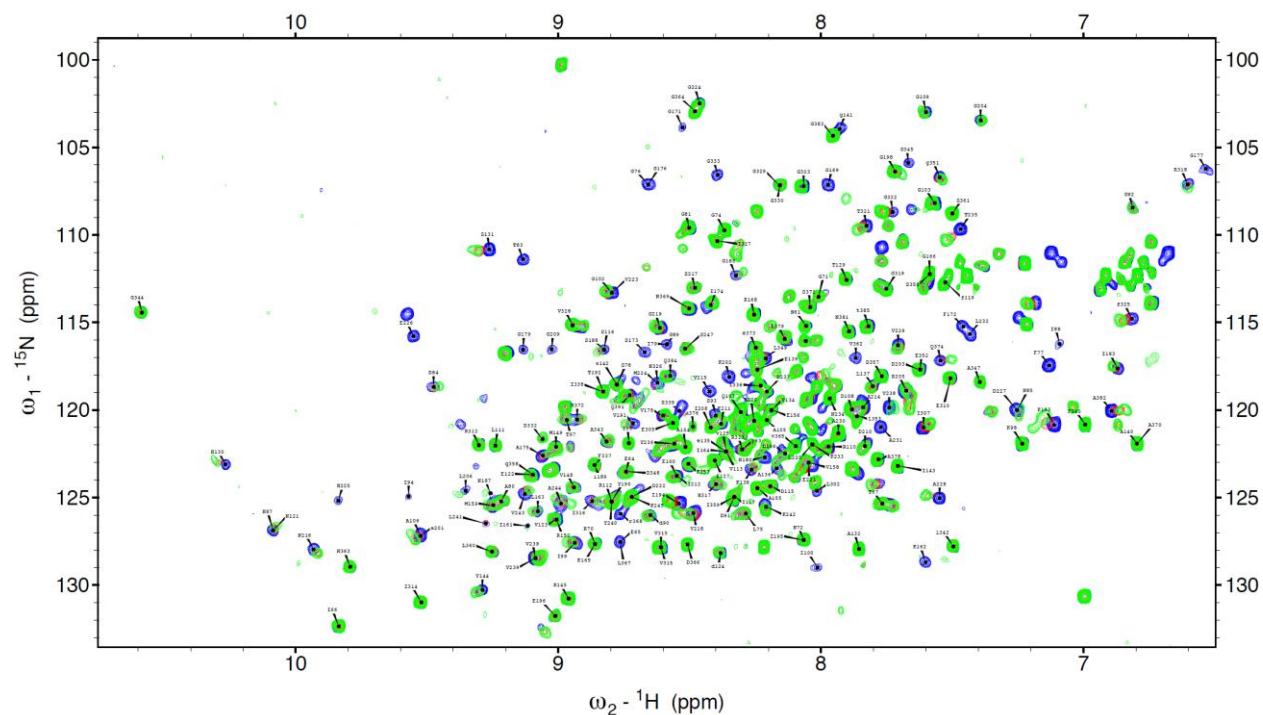


Fig. 1. Overlay of  $^1\text{H}$ - $^{15}\text{N}$  HSQC NMR spectra: blue, PSD-95 PDZ1–3 (100  $\mu\text{M}$ ) alone; red, after addition of NR2B-c20 (196  $\mu\text{M}$ ), and green, after addition of NR2B-c20 (310  $\mu\text{M}$ ). *HSQC*, Heteronuclear Single Quantum Coherence; *NMR*, nuclear magnetic resonance; *PSD-95*, postsynaptic density protein-95; *PDZ*, postsynaptic density protein-95, *Drosophila* disc large tumor suppressor, and zonula occludens-1.

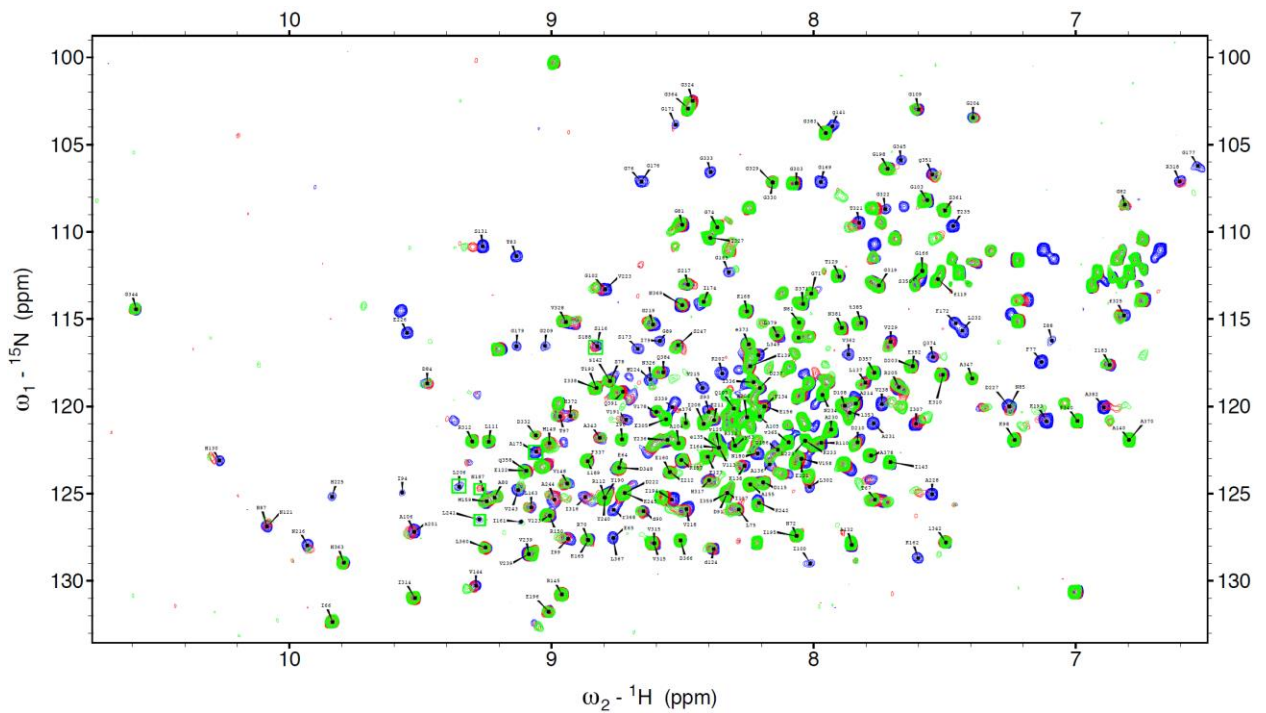


Fig. 2. Overlay of  $^1\text{H}$ - $^{15}\text{N}$  HSQC NMR spectra: blue, PSD-95 PDZ1–3 (100  $\mu\text{M}$ ) alone; red, after addition of NR2A-c20 (196  $\mu\text{M}$ ); and green, after addition of NR2A-c20 (310  $\mu\text{M}$ ). *HSQC*, Heteronuclear Single Quantum Coherence; *NMR*, nuclear magnetic resonance; *PSD-95*, postsynaptic density protein-95; *PDZ*, postsynaptic density protein-95, Drosophila disc large tumor suppressor, and zonula occludens-1.

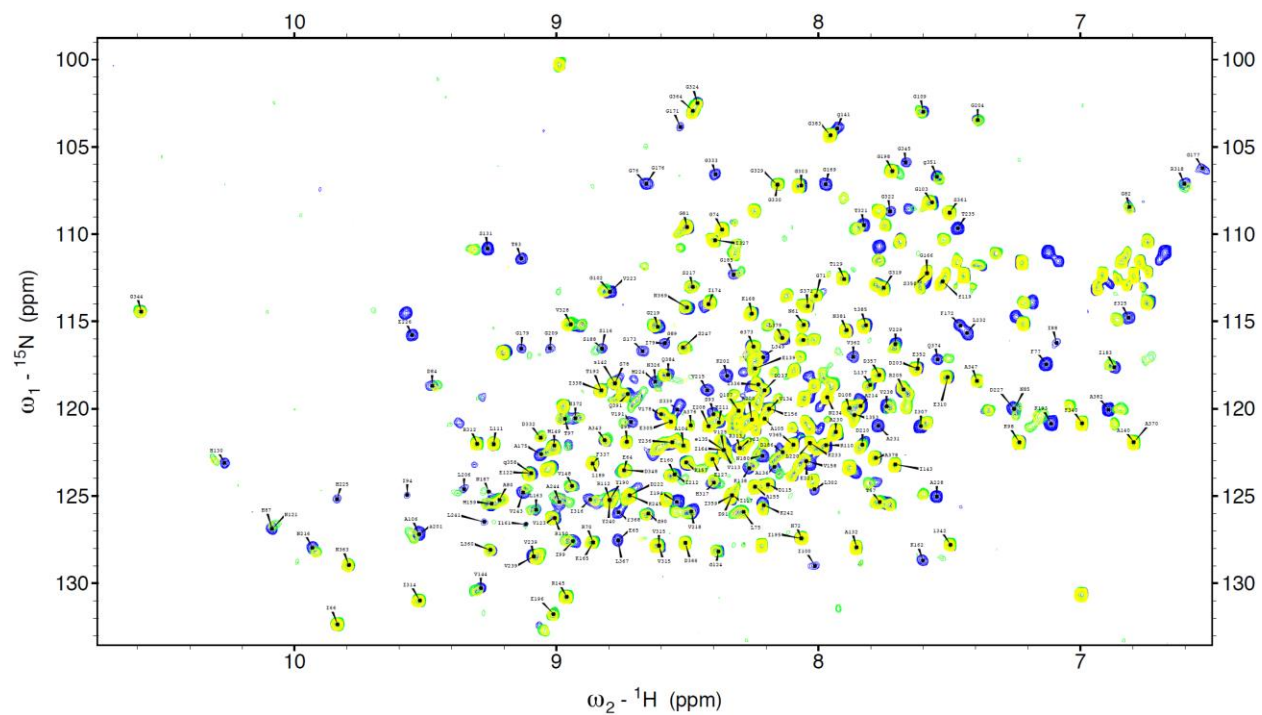


Fig. 3. Overlay of  $^1\text{H}$ - $^{15}\text{N}$  HSQC NMR spectra: blue, PSD-95 PDZ1-3 (100  $\mu\text{M}$ ) alone; green, after addition of NR2B-c20 (310  $\mu\text{M}$ ); and yellow, after addition of isoflurane (3.1 mM). *HSQC*, Heteronuclear Single Quantum Coherence; *NMR*, nuclear magnetic resonance; *PSD-95*, postsynaptic density protein-95; *PDZ*, postsynaptic density protein-95, Drosophila disc large tumor suppressor, and zonula occludens-1.

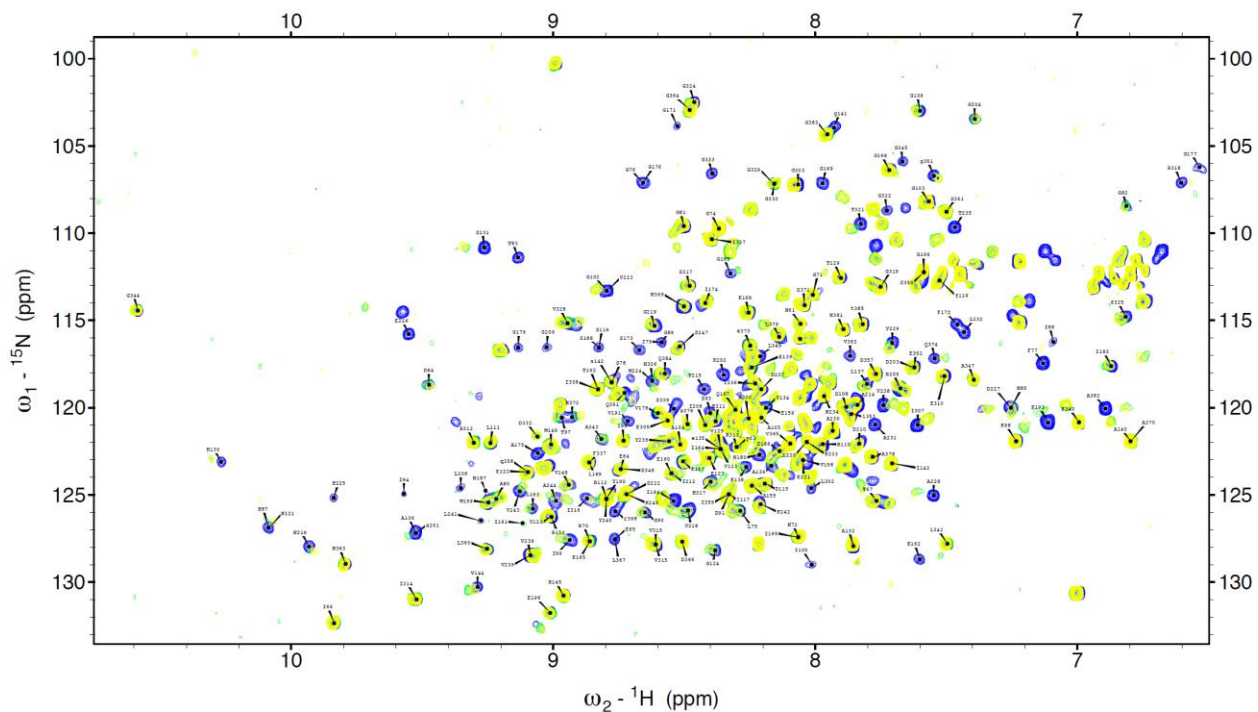


Fig. 4. Overlay of  $^1\text{H}$ - $^{15}\text{N}$  HSQC NMR spectra: blue, PSD-95 PDZ1-3 (100  $\mu\text{M}$ ) alone; green, after addition of NR2A-c20 (310  $\mu\text{M}$ ); and yellow, after addition of isoflurane (3.1 mM). *HSQC*, Heteronuclear Single Quantum Coherence; *NMR*, nuclear magnetic resonance; *PSD-95*, postsynaptic density protein-95; *PDZ*, postsynaptic density protein-95, Drosophila disc large tumor suppressor, and zonula occludens-1.

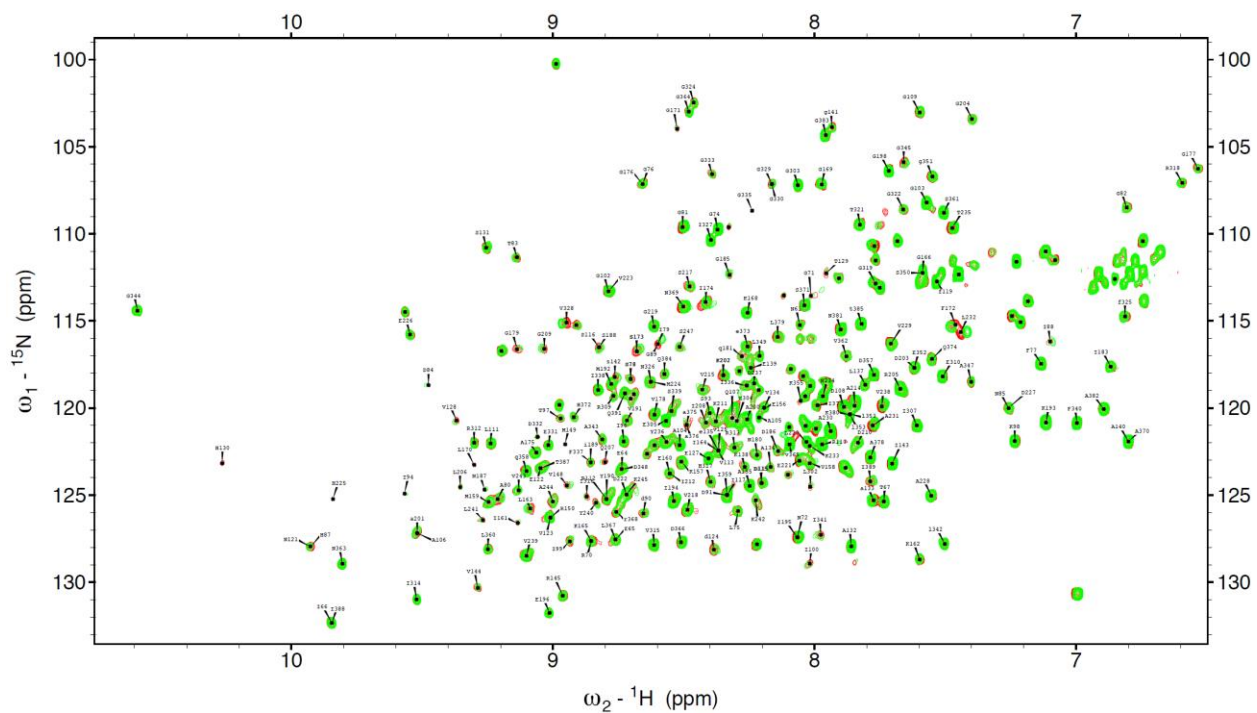


Fig. 5.  $^1\text{H}$ - $^{15}\text{N}$  HSQC NMR spectra of PSD-95 PDZ1-3 (120  $\mu\text{M}$ ) in the absence (red) and presence (green) of isoflurane (3.1 mM). *HSQC*, Heteronuclear Single Quantum Coherence; *NMR*, nuclear magnetic resonance; *PSD-95*, postsynaptic density protein-95; *PDZ*, postsynaptic density protein-95, *Drosophila disc large tumor suppressor*, and *zonula occludens-1*.

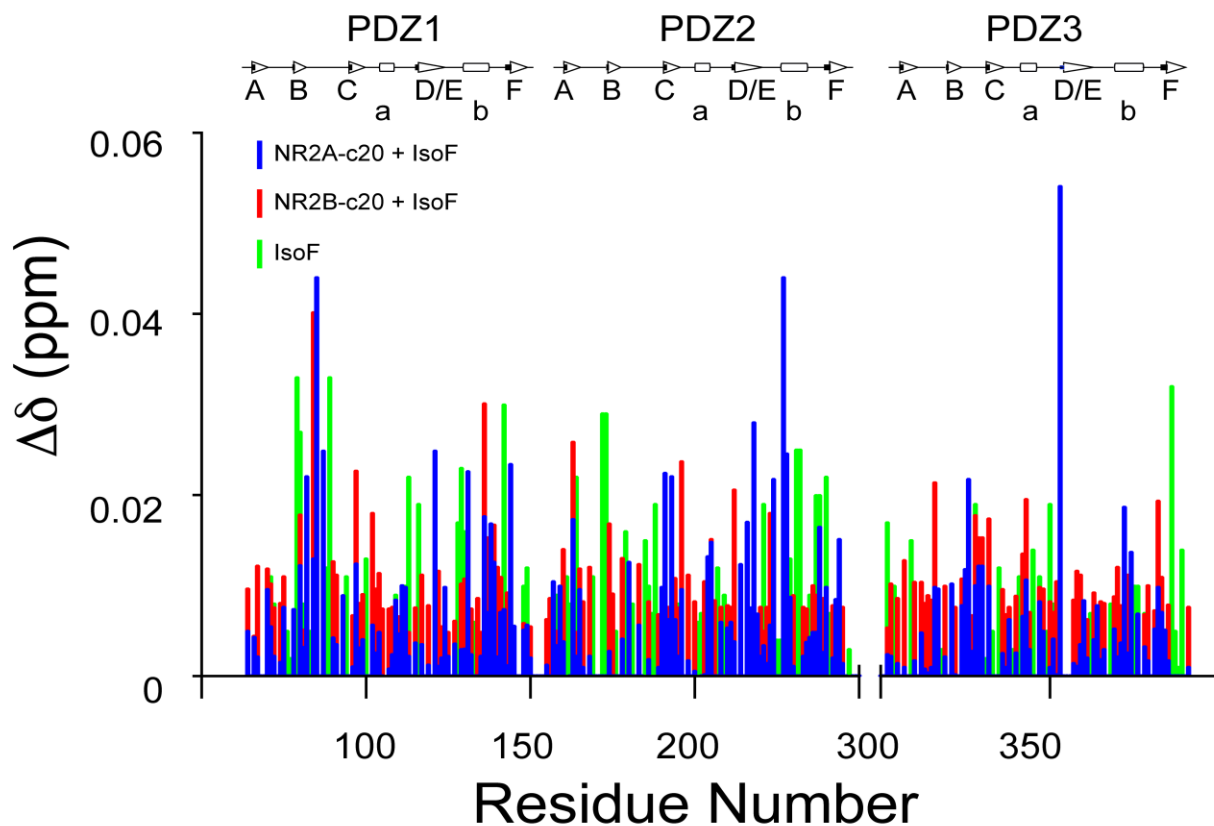


Fig. 6. Comparison of isoflurane (3 mM) perturbation to the combined chemical shifts of the PSD-95 PDZ1–3 (120  $\mu$ M) in the absence and presence of peptides, NR2A-c20 (310  $\mu$ M) and NR2B-c20 (310  $\mu$ M). *PSD-95*, postsynaptic density protein-95; *PDZ*, postsynaptic density protein-95, *Drosophila disc large tumor suppressor*, and *zonula occludens-1*.