



**Supplemental Figure 1. Mean current-voltage plots of glutamate-evoked currents mediated by wild-type and chimeric NMDARs in the presence of Mg<sup>2+</sup> ions or memantine.** *A*, mean current-voltage plots (from  $-80$  mV to  $+10$  mV) for glutamate-evoked NR1/NR2A NMDAR-mediated currents recorded in the absence (filled squares;  $n = 10$ ) or presence of Mg<sup>2+</sup> (1 mM, open circles;  $n = 10$ ) or memantine (10 μM, open triangles;  $n = 6$ ). *B*, as *A*, but for glutamate-evoked NR1/NR2D NMDAR-mediated currents ( $n = 3, 7$  and  $4$ , for 'control', Mg<sup>2+</sup> and memantine, respectively). *C*, as *A*, but for glutamate-evoked NR1/NR2A(2D-S1S2) NMDAR-mediated currents ( $n = 12, 12$  and  $6$ , for 'control', Mg<sup>2+</sup> and memantine, respectively). *D*, as *A*, but for glutamate-evoked NR1/NR2A(2D-M1M2M3) NMDAR-mediated currents ( $n = 10, 10$  and  $8$ , for 'control', Mg<sup>2+</sup> and memantine, respectively). *E*, as *A*, but for glutamate-evoked NR1/NR2A(2D-S1M1M2M3S2) NMDAR-mediated currents ( $n = 7, 7$  and  $5$ , for 'control', Mg<sup>2+</sup> and memantine, respectively).