



Supp. Fig. 1. Dopamine decreases EPSC amplitude at the CF-PC synapse through activation of D2-type dopaminergic receptors. CF-EPSCs in PCs in response to pairs of CF stimuli separated by 30 ms. (A) Effects of dopamine (20 μ M, n=6) and subsequent application of the D2-receptor antagonist sulpiride (10 μ M) on the first EPSC (black filled circles), the second EPSC (open circles) and paired-pulse ratio (gray circles). (B) The D1-receptor antagonist SCH 23390 (10 μ M) does not affect the CF-EPSC measured in the presence of DA (n=6). (C) Experiments similar to those in A are shown but the D2-receptor agonist quinpirole (10 μ M) is used rather than DA (n=6). (D) The D1-receptor agonist SKF 38393 (10 μ M) has no effect on CF-EPSCs. All responses are normalized to the average amplitude of the first EPSC, before drug application. (E) Summary of effects of DA on parallel fiber (PF) EPSCs recorded from Purkinje cells. These results indicate that DA modulates the CF through D2-type receptors, and could provide an additional mechanism for control of associative plasticity in PCs, although the effects were smaller and less reliable than the effects of noradrenaline.