



**Figure S4. NMR chemical shift perturbation data of parkin Ubl domain upon binding the UIM region(s) of ataxin-3 (A) UIM\_123, (B) UIM\_1, (C) UIM\_2, and (D) UIM\_3.** The changes in chemical shift were calculated using the equation,  $((0.2 \times \Delta\delta_N^2) + \Delta\delta_H^2)^{1/2}$ , where  $\Delta\delta_N$  and  $\Delta\delta_H$  represent the change in nitrogen and proton chemical shifts (in parts per million) upon Ubl domain addition. The dotted green line indicates 0.5 S.D. above the average chemical shift perturbation value.