



Fig. S6. Metal contents of PP2Ai-PTPA before and after activation by Mg²⁺/ATP. PP2Ac-PTPA exchanged for Zn²⁺ was treated by PPI, followed by removal of free metal ions by gel filtration. The inactive complex was re-activated by Mg²⁺/ATP followed by addition of two molar excess of okadaic acid and removal of free Mg²⁺/ATP by gel filtration. The level of metal ions associated with PP2Ai-PTPA and the re-activated metalloenzyme bound to okadaic acid was determined by ICP-MS after replacement of buffer with “metal free” water by 2nd gel filtration chromatography. The increased Zn²⁺ occupancy of the re-activated enzyme is likely due to binding of, or replacement of bound Mg²⁺ by scavenging metal ions remained in the “metal free” solutions during activation and two rounds of gel filtration chromatography prior to ICP-MS analysis.