



**Extended Data Figure 8. Structure comparison of substrate-bound and apo MmCAT1.** (a) Extracellular gate and (b) extracellular face of arginine-bound and apo MmCAT1, colored in purple and orange, respectively. Cryo-EM map of MmCAT1, with lateral peptide colored in red, for (c) arginine-bound and (d) apo state structures. Location of the lateral peptide (e) in MmCAT1 and (f) the equivalent position in GkApcT. Cryo-EM map of MmCAT1 with for (g) arginine-bound and (h) apo state structures, with arginine colored in red.