MT length: 50 um

MT lumen diameter: 15 nm

αTAT1 diameter: 6 nm

α-Tubulin diameter: 5 nm

β-Tubulin diameter: 5 nm

Lateral defects on MTs: 10-20 nm

αTAT1 diffusion in 3D cytoplasm: 25 um2/s

αTAT1 catalysis rate: kcat = 21.29 X 10-4/s

Km = 31.44 uM

KD = 45 uM

αTAT1 1D diffusion: 0.27 um2/s

Average interaction time between αTAT1 and MTs: 1.5s

Average MT scanning length: 3 um

Acetylation rate: 1.6/hr