**Table S1 - Thickness (Å) and area per lipid (Å2) for the lipid bilayer for 10 μs coarse grain simulations on GlyT2 in a POPC/CHOL membrane with no lipid inhibitors (control) or 20 of the specified lipid inhibitors present.**

|  |  |  |
| --- | --- | --- |
| Lipid Inhibitor | Area Per Lipida | Membrane Thicknessb |
| None | 58.28±0.41 | 41.35±0.21 |
| OLLys | 58.13±0.68 | 41.33±0.20 |
| OLLeu | 57.94±0.55 | 41.36±0.22 |
| OLTrp | 58.55±0.40 | 41.39±0.20 |
| OLSer | 58.23±0.84 | 41.33±0.21 |
| aArea per lipid is measured for the POPC lipid headgroups | | |

bMembrane thickness is measured at the distance between P atoms in the POPC headgroups