

Supplementary Figure S11

Theoretical considerations of membrane fusion energies

Energy required for membrane fusion: 40 to 120 k_bT

Energy released by Influenza HA trimer refolding: 30 to 60 k_bT

Energy released by SNARE complex refolding: 20 to 65 k_bT

Number of HA trimers estimated to partake in membrane fusion: 3 to 4
> total energy released 90 to 240 k_bT

Number of SNAREs estimated to partake in membrane fusion: 1 to 3
> total energy released 20 to 195 k_bT

Number of env trimers estimated to partake in membrane fusion: 2 to 7

Assuming that the energy required for membrane fusion is 40 to 120 k_bT
it follows that each HIV env trimer releases

> 20 to 60 k_bT if $T=2$

> 6 to 17 k_bT if $T=7$