

Description of Additional Supplementary Files

File name: Supplementary Movie 1

Description: **3D FLIM image of HT-aggr(ER)**. High resolution fast 3D FLIM image of CHO-K1 cells to show the intra-ER localisation of HT-aggr protein aggregates.

File name: Supplementary Movie 2

Description: **Turnover of HT-aggr(ER)**. Turnover rates of HT-aggr(ER) (K73T) labelled with HaloTag ligand TMR used to calculate HT-aggr degradation rate constant and half-life time.

File name: Supplementary Movie 3

Description: **Turnover of HT WT(ER)**. Turnover rates of HT WT(ER) labelled with HaloTag ligand TMR used to calculate HT WT degradation rate constant and half-life time.

File name: Supplementary Movie 4

Description: **Turnover of HT-aggr(ER) in the presence of tunicamycin**. Turnover rates of HT-aggr(ER) (K73T) labelled with HaloTag ligand TMR in the presence of tunicamycin (0.5 µg/mL) used to calculate HT-aggr degradation rate constant and half-life time.

File name: Supplementary Movie 5

Description: **Turnover of HT WT(ER) in the presence of tunicamycin**. Turnover rates of HT WT(ER) (K73T) labelled with HaloTag ligand TMR in the presence of tunicamycin (0.5 µg/mL) used to calculate HT WT degradation rate constant and half-life time.