



Supplementary Fig. 1. Assembly of deuterated stealth nanodiscs. (a) Thin layer chromatography of a total lipid extract (TE) obtained from a genetically modified *E. coli* strain (grown in deuterated media at ~100% D₂O in the presence of deuterated glycerol and partially deuterated choline) and of purified deuterated phosphatidylcholine PC (D_{gly}D_{cho}-PC). Cardiolipin (CL), phosphatidylglycerol (PG), phosphatidylethanolamine (PE) and PC. (b) SDS-PAGE showing deuterated membrane scaffold protein D-MSP1D1 used in the preparation of the stealth nanodiscs next to a molecular weight marker (Fermentas). (c) size exclusion chromatogram (Superdex 200 10/300 GL, GE Healthcare) of the nanodisc assembled with D_{glycerol}D_{choline}-PC and D-MSP1D1 with the fractions used for further analysis marked in green. Absorption is monitored at 280 nm and displayed in arbitrary units (a.u.).