Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: Raw movie file of imaging single DII-BODIPY- C_{12} states.

File Name: Supplementary Movie 2

Description: Conventional fluorescence movie of BODIPY-NL excited at 488 nm under fasting conditions. LDs are either tethered to the vacuole or exhibit fast diffusion inside the

vacuole.