Biophysical Journal, Volume 99

Supporting Material

Implication of Sphingomyelin/Ceramide Molar Ratio on the Biological Activity of Sphingomyelinase

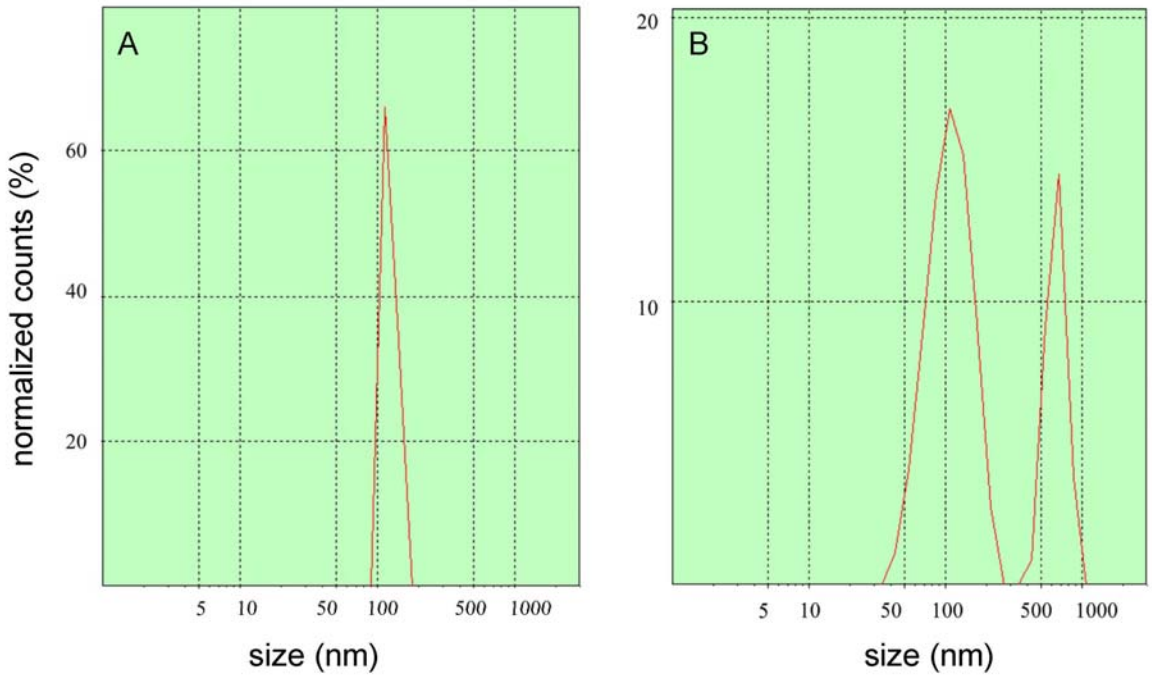
Beate Boulgaropoulos, Heinz Amenitsch, Peter Laggner, and Georg Pabst

Supporting Material for

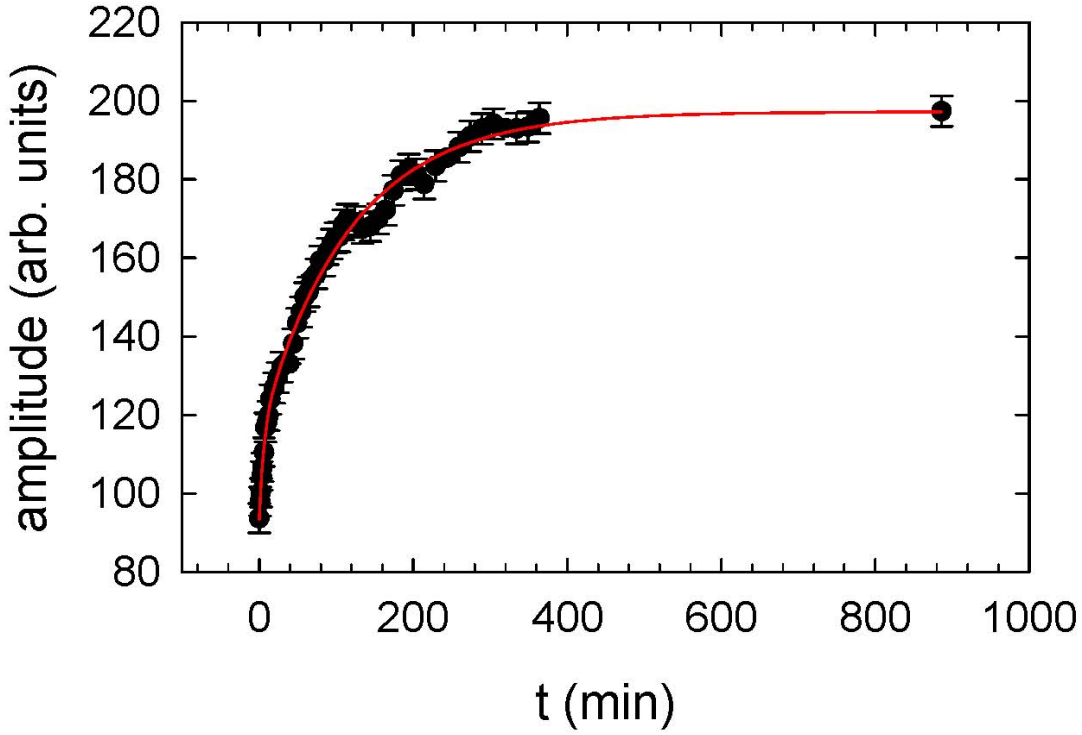
Implication of Sphingomyelin/Ceramide Molar Ratio on the Biological Activity of Sphingomyelinase

Beate Boulgaropoulos, Heinz Amenitsch, Peter Laggner and Georg Pabst

Institute of Biophysics and Nanosystems Research, Austrian Academy of Sciences, Schmiedlstr. 6, A-8042 Graz, Austria



Supporting Figure S1: Size distributions of vesicles as determined from photon correlation spectroscopy. Panel A shows a single distribution centered at 120 nm (PDI = 0.13) prior to the addition of SMase for LUVs composed of POPC and SM. Enzymatic degradation of SM by SMase leads to a dramatic change of the size distributions in form of a broadening of the original distribution and the generation of second population of vesicles (MLVs) with an average size of 700 nm (Panel B).



Supporting Figure S2: Increase of the WAXS peak amplitude during SMase activity. The red line shows a double exponential fit (amp = a + b[1-exp(-t/t_1)] + c[1-exp(-t/t_2)]; a, b, c…constants) yielding the time constants t_1 = 6.0 ± 1.5 min and t_2 = 116 ± 7 min.