

Ionic liquid mediated transcutaneous protein delivery with solid-in-oil nanodispersion

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Supplementary data and Figure

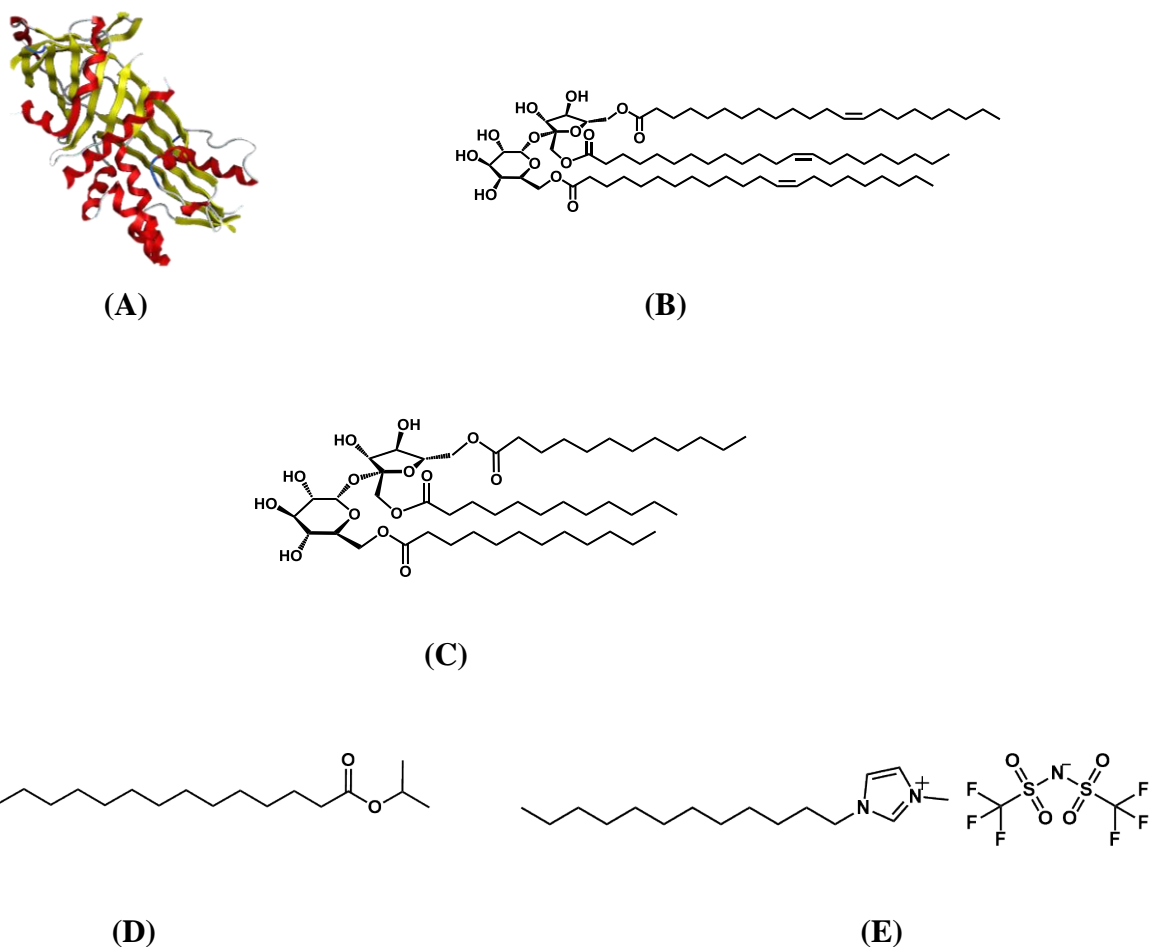


Fig. S1 (A) ovalbumin (OVA), (B) Surfactant, Sucrose erucate (ER-290); (C) Surfactant Sucrose laurate (L-195) (D) IPM and (E) hydrophobic IL [C₁₂mim][Tf₂N] (1-dodecyl-3-methyl imidazolium bis(trifluoromethyl sulfonyl) amide)

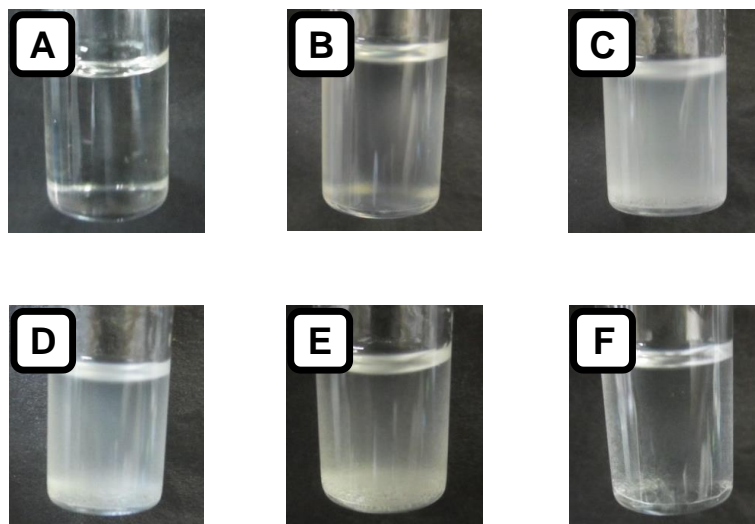


Fig. S2: Photograph showing the solubility of ionic liquids (ILs) of 10vol % and DMSO (10 vol%) in IPM at 25°C: (A) $[C_{12}mim][Tf_2N]$, (B) $[C_8mim][Tf_2N]$, (C) $[C_4mim][Tf_2N]$, (D) $[C_2mim][DEP]$, (E) $[C_2mim][OAc]$ and (F) DMSO

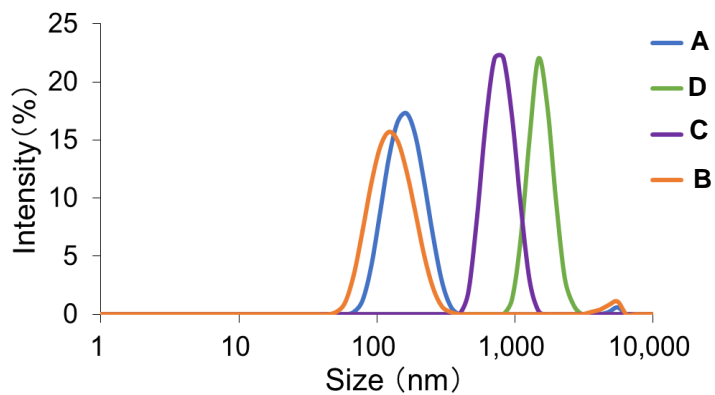


Fig. S3 Sizes and size distributions of the S/O nanoparticles in IPM with various IL contents. (a) IL = 0, (b) 5 vol% (c) 10vol% and (d) 25 vol% .

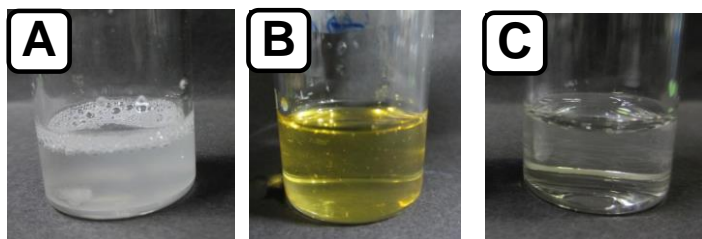


Fig.S4 Solubility of of phosphatidylcholine (PC) (20 mg mL^{-1}) in various systems. (A) IPM, (B) IL $[\text{C}_{12}\text{mim}][\text{Tf}_2\text{N}]$ and (C) IPM + IL system containing 5 vol% IL.

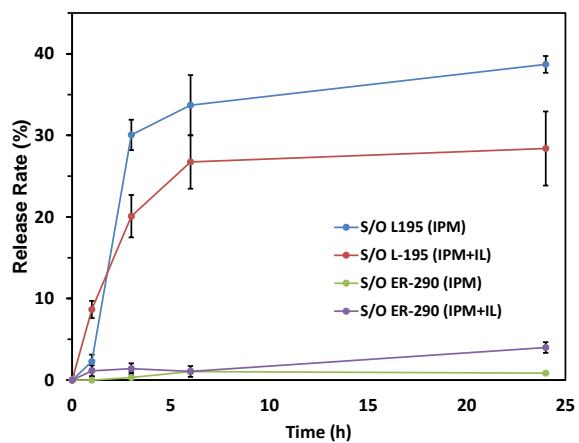


Fig. S5 Time course of OVA release in PBS from the S/O nanodispersion with and without IL.

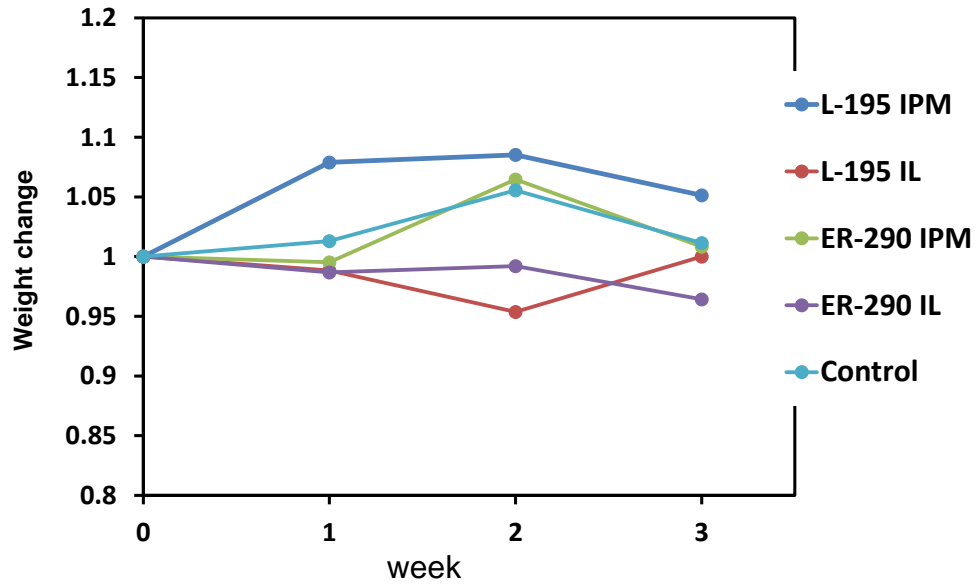


Fig. S6 Monitoring weigh change of mice with time. Data represents average of 5-6 mice.