

P2X7 Receptor Antagonist delivery vehicle based on photocrosslinked amphiphilic hybrid gels

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SUPPLEMENTARY INFORMATION

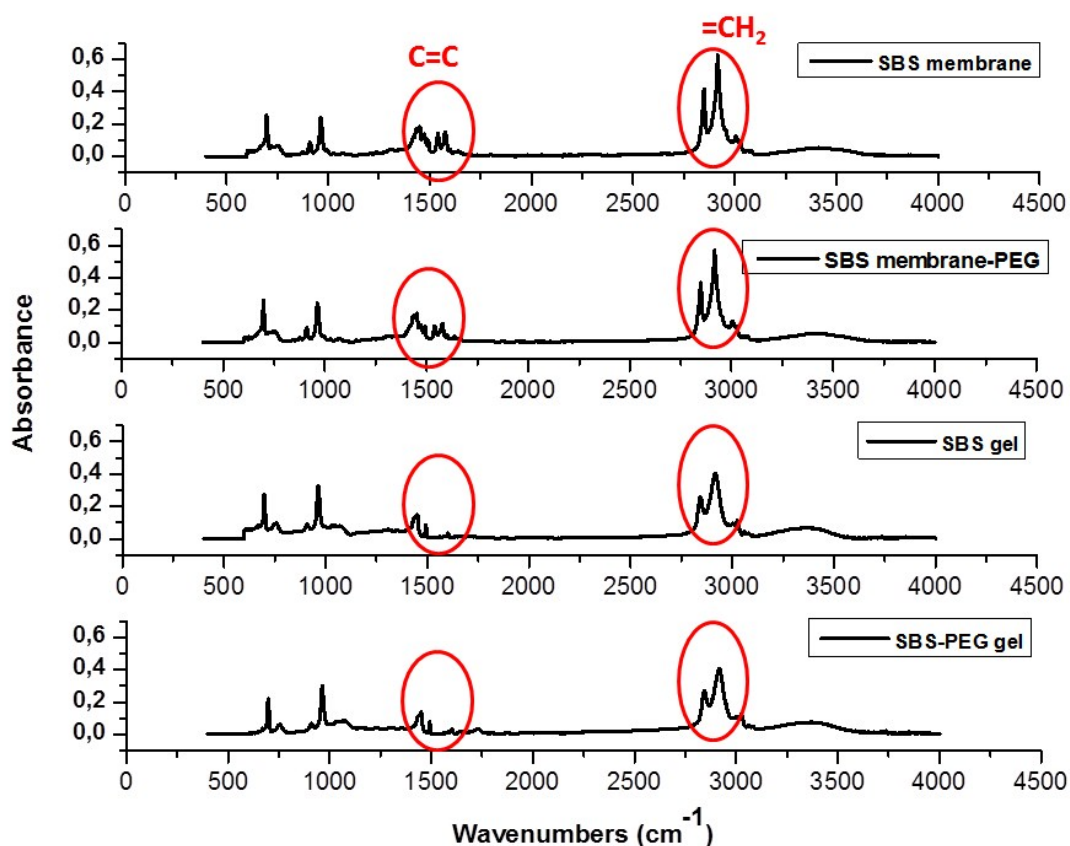


Figure S1. FTIR spectra of SBS membrane, SBS membrane-PEG, SBS gel and SBS-PEG gel

Figure S1 demonstrates the peaks related to the asymmetrical (at 2920 cm⁻¹) and stretching (at 3006 cm⁻¹) vibrations of =CH₂ groups in pendant vinyl double bonds of butadiene. Decreases in the peaks at 2920 cm⁻¹ were observed in SBS gel and SBS-PEG gel groups compared to

that of SBS membrane and SBS membrane-PEG groups. This result could be attributed to the saturation of vinyl groups in the SBS structure in crosslinked SBS and SBS-PEG gels samples.

The peak at 1639 cm^{-1} can be assigned to stretching vibrations of (C=C) in vinyl-vinyl-polybutadiene groups. Decreases in this peak in SBS gel and SBS-PEG gels could be attributed to the consumption of these double bonds in SBS upon crosslinking. The peaks at the 1580 cm^{-1} and 1602 cm^{-1} were assigned to stretching vibrations of the carbons in the aromatic rings where these peaks disappeared in crosslinked SBS and SBS-PEG gel networks as a result of the formation of a stable network. This analysis confirms the successful cross-linking of SBS polymer both in SBS and SBS-PEG gels.

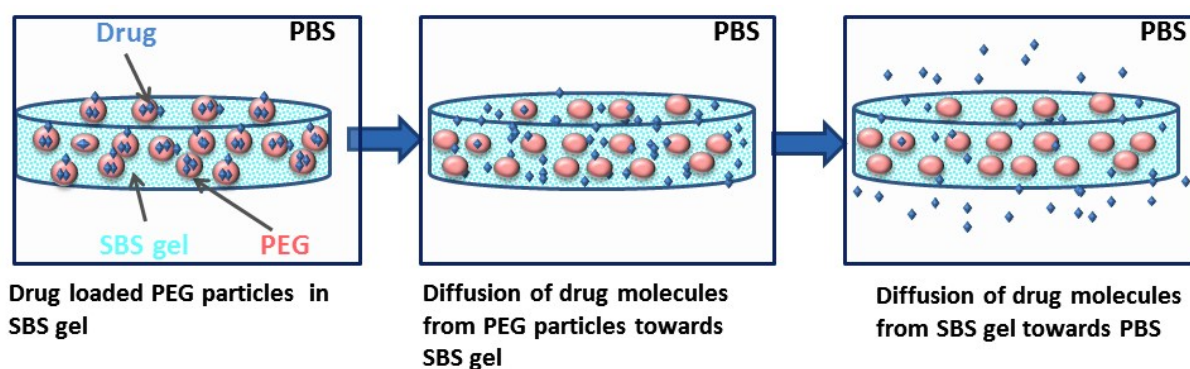


Figure S2. Possible diffusion process/mechanism for the release of the P2X7 from SBS-PEG gels towards PBS.

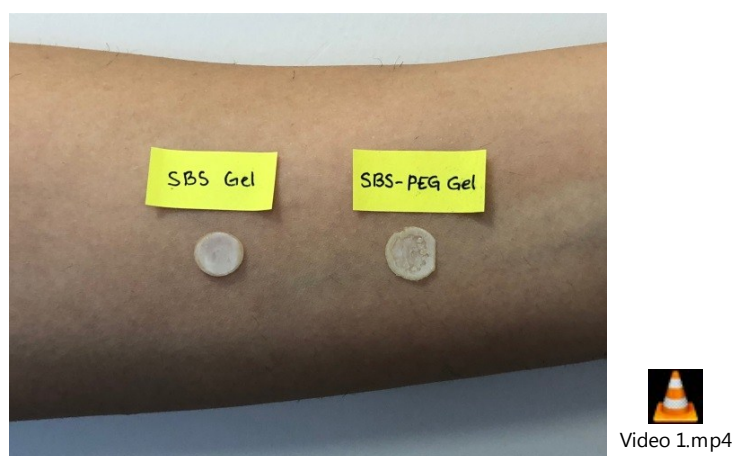


Figure S3. Adhesion and biocompatibility experiment of SBS gel and SBS-PEG gel on human skin.