

## Supplemental information

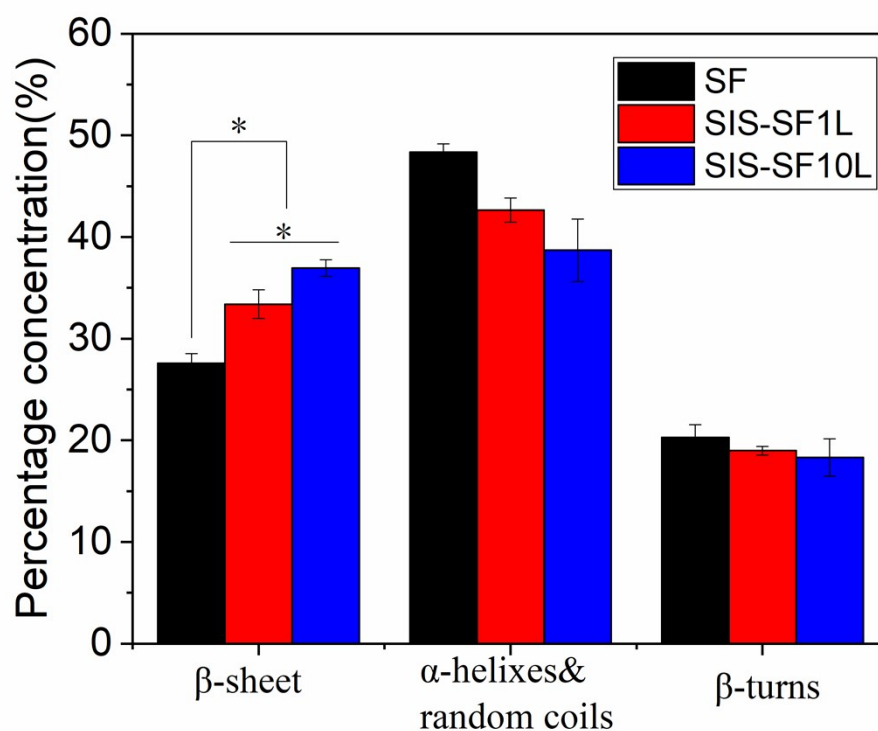


Fig.S1. The contents of different secondary structures in Amide I region of SF, SIS-SF1L, SIS-SF10L.

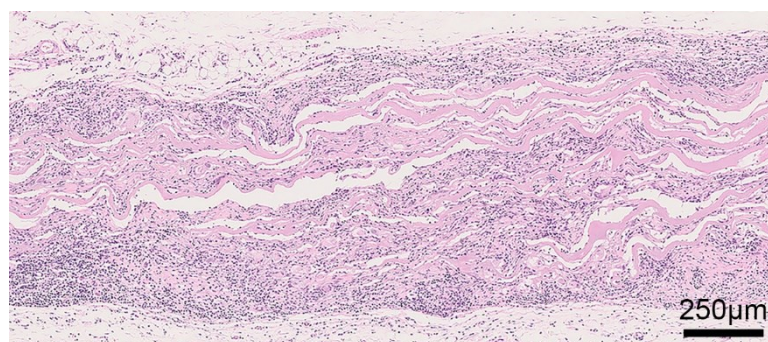


Fig.S2. Representative image of the H&E staining of sections of SIS membrane after 2 weeks of subcutaneous implantation.

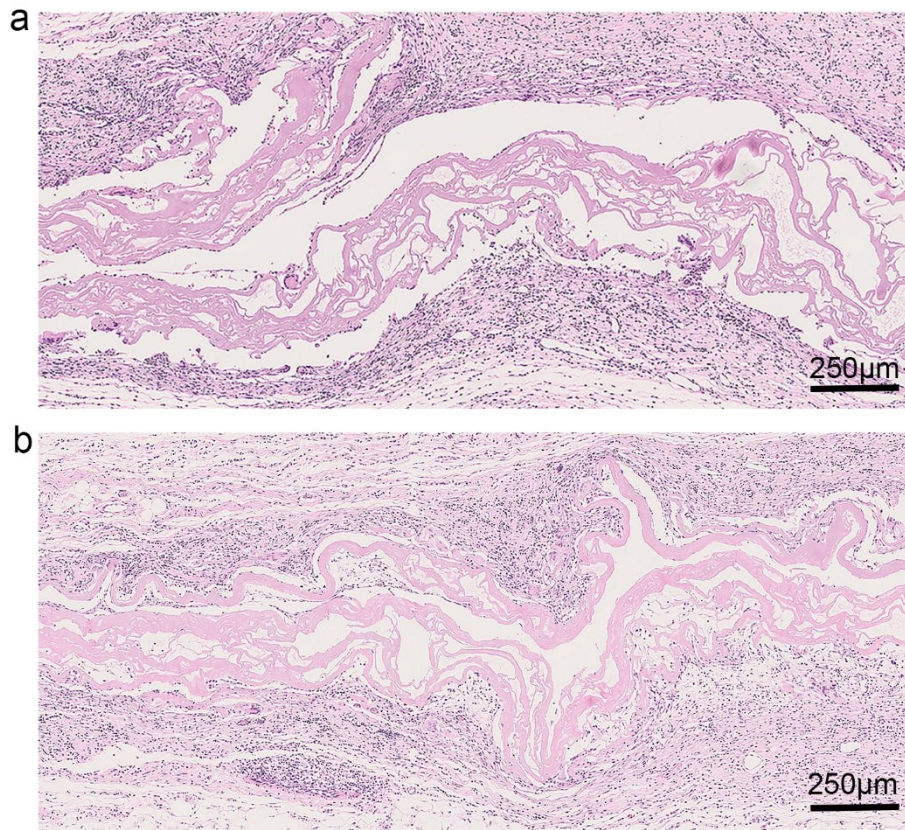


Fig.S3. Representative image of the H&E staining of sections of SIS-SF membranes after 2 weeks of subcutaneous implantation. (a) Representative image of the H&E staining of sections of SIS-SF1 membrane. (b) Representative image of the H&E staining of sections of SIS-SF10 membrane.