

Supplementary Material for - A hybrid-membrane migration method to isolate high-purity  
adipose-derived stem cells from fat tissues

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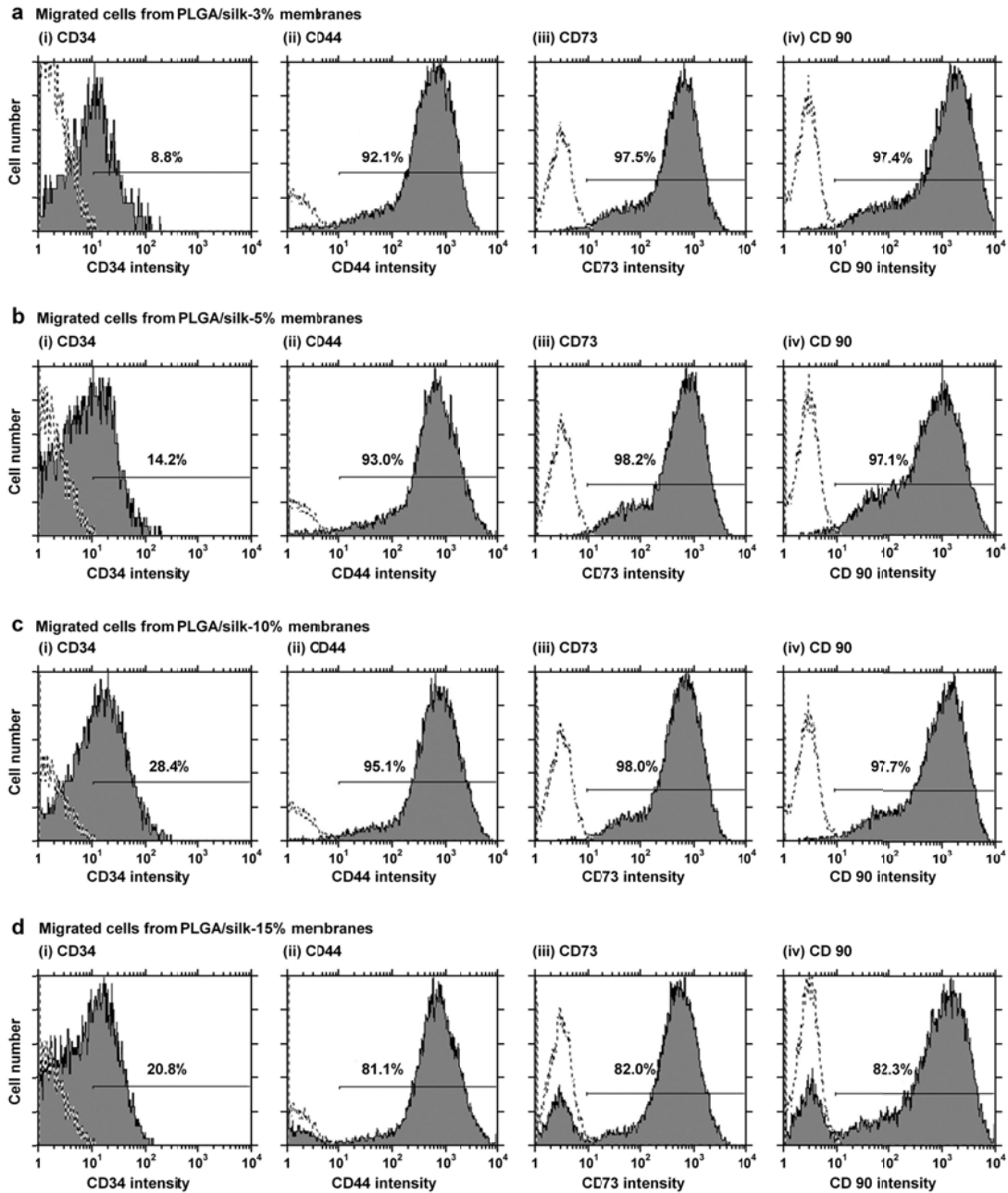
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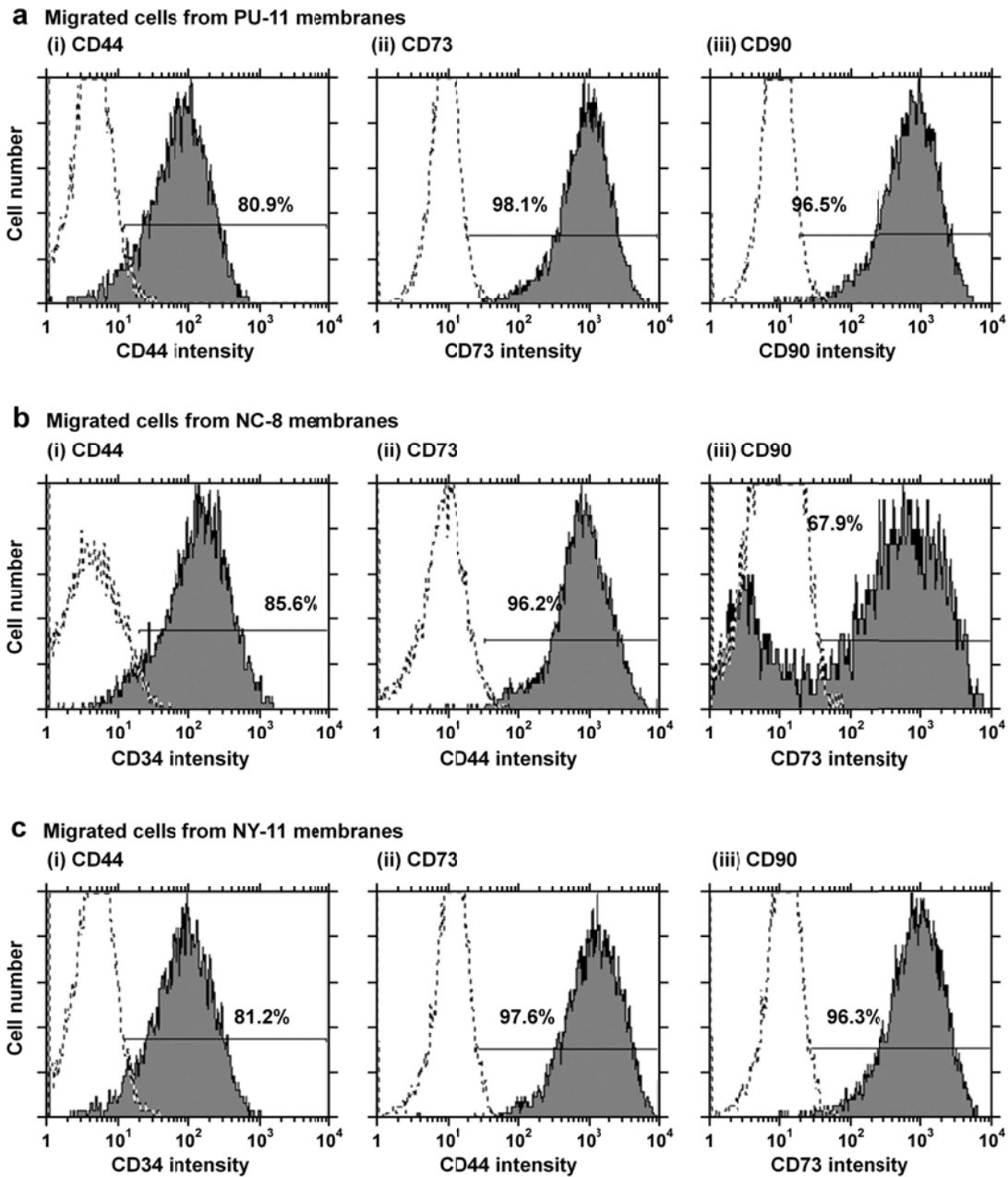
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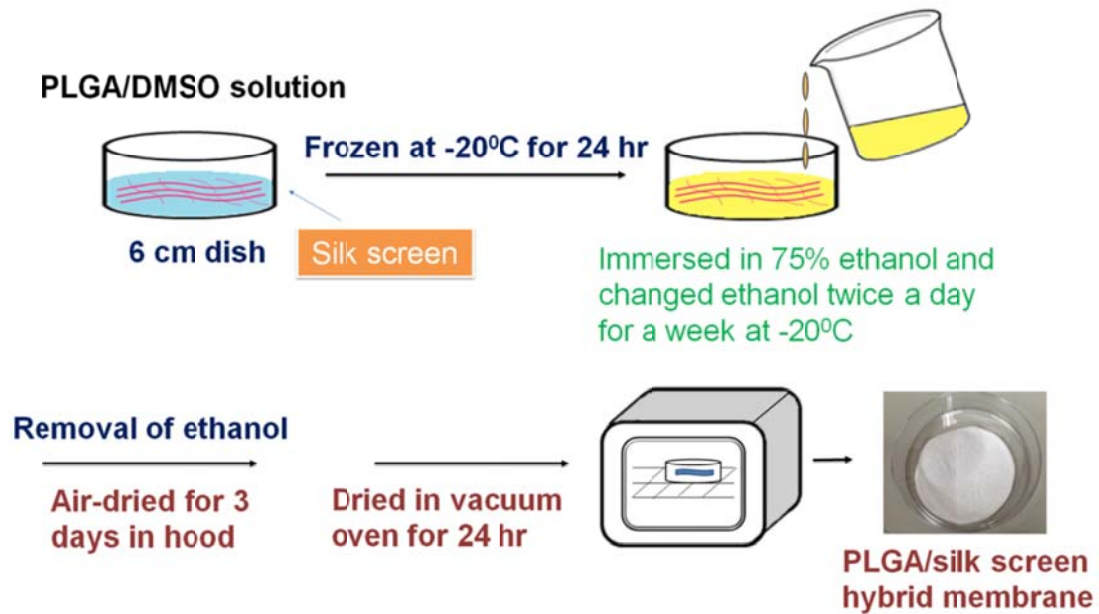
## SUPPLEMENTARY FIGURES



**Supplementary Figure 1.** CD34 (i) and MSC markers (CD44 (ii), CD73 (iii), and CD90 (iv)) expression analyzed by flow cytometry. Flow cytometry scattergrams of the migrated cells from (a) PLGA/silk-3%, (b) PLGA/silk-5%, (c) PLGA/silk-10% and (d) PLGA/silk-15% membranes and subsequently cultured for 15 days after SVF was permeated through the membranes. The dotted lines indicate cells labeled with the isotype controls.



**Supplementary Figure 2.** MSC markers (CD44 [i], CD73 [ii], and CD90 [iii]) expression analyzed by flow cytometry. Flow cytometry scattergrams of the migrated cells from (a) PU-11, (b) NC-8 and (c) NY-11 membranes and subsequently cultured for 15 days after SVF was permeated through the membranes. The dotted lines indicate cells labeled with the isotype controls.



**Supplementary Figure 3.** Manufacturing procedures of the PLGA/silk membranes prepared by the freeze-extraction method.

## SUPPLEMENTARY TABLE

**Supplementary Table 1** Characteristics of membranes used in this study.

Membranes	Materials	Pore size ( $\mu\text{m}$ )	Porosity (%)	Thickness ( $\mu\text{m}$ )
Silk-PLGA-3%	Silk & PLGA	24.4		
Silk-PLGA-5%	Silk & PLGA	22.4		
Silk-PLGA-10%	Silk & PLGA	20.8		
Silk-PLGA-15%	Silk screen & PLGA	18.2		
PU-11	Polyurethane	11.0	86	1200
NC-8	Nitrocellulose	8.0	84	135
NY11	Nylon	11.0	6	65