

Supporting Information

Enhanced proliferation and differentiation of retinal progenitor cells through a self-healing injectable hydrogel

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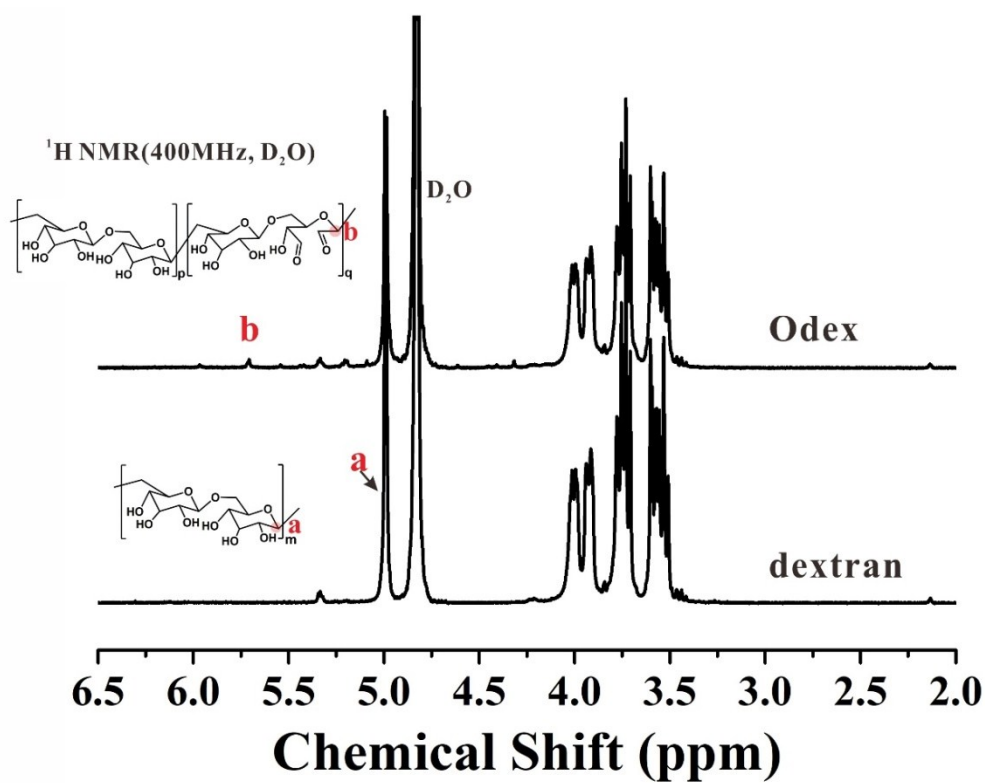


Fig. S1. The ¹H NMR spectra of dextran and Odex and a new peak appeared in Odex (referred to "b") as the consequence of oxidation.

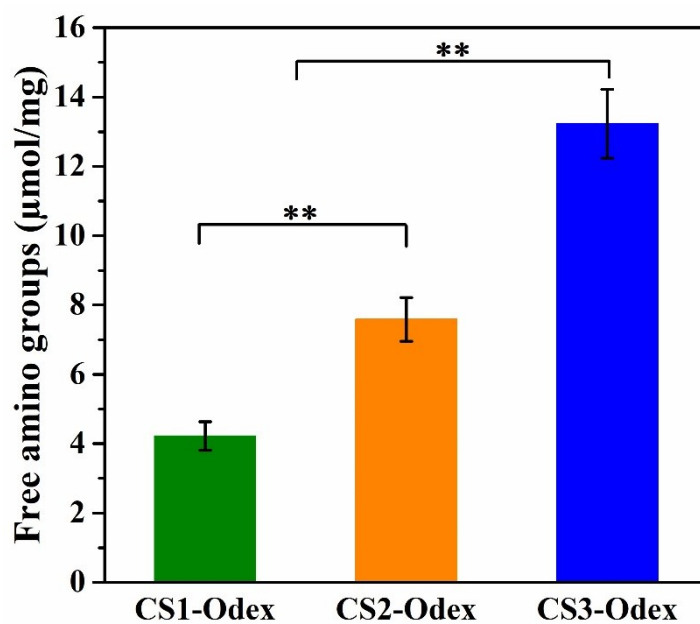


Fig. S2. Remaining amino groups in the CS-Odex hydrogel (**P < 0.01).

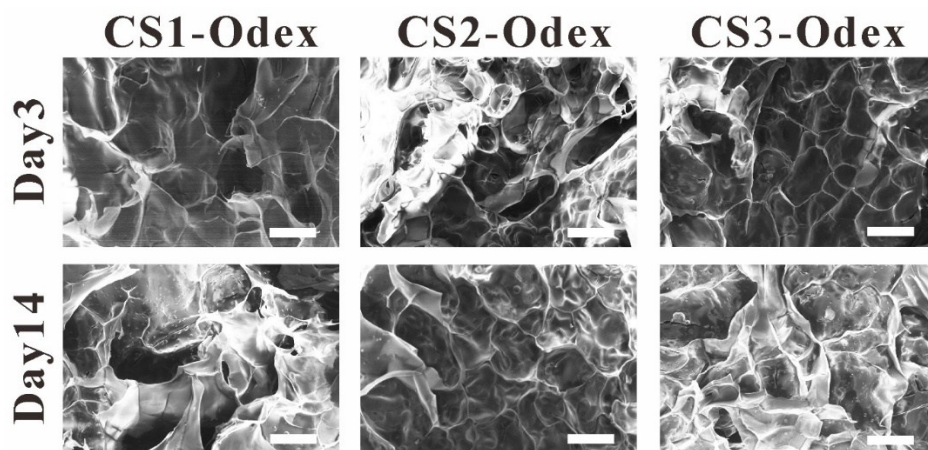


Fig. S3. SEM images of the CS-Odex hydrogel degraded in the PBS 7.4 at 37 °C by day 3 and 14. Scar bar:200 μm .

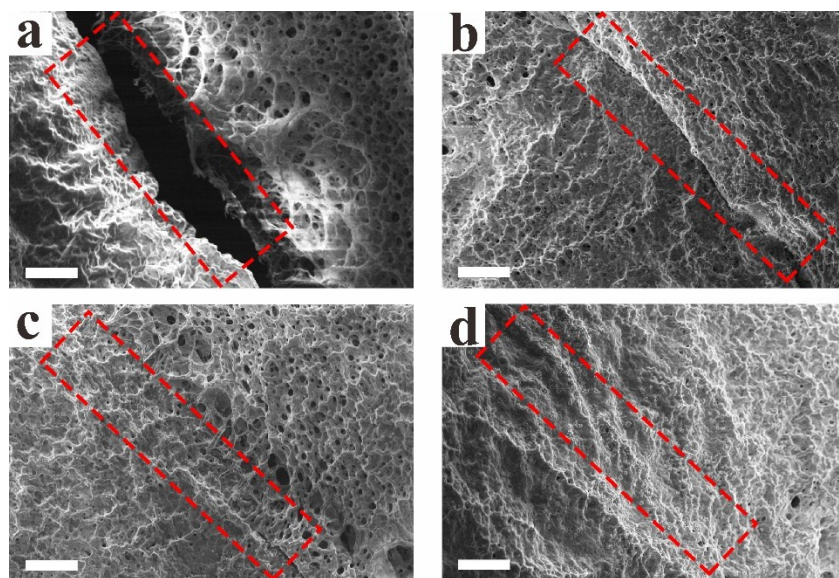


Fig. S4. SEM images of the CS2-Odex hydrogel after being self-healed for (a) 0 min, (b) 10 min, (c) 30 min, and (d) 60 min. Dotted area: boundary of the two halves of the hydrogel. Scar bar: 50 μm .

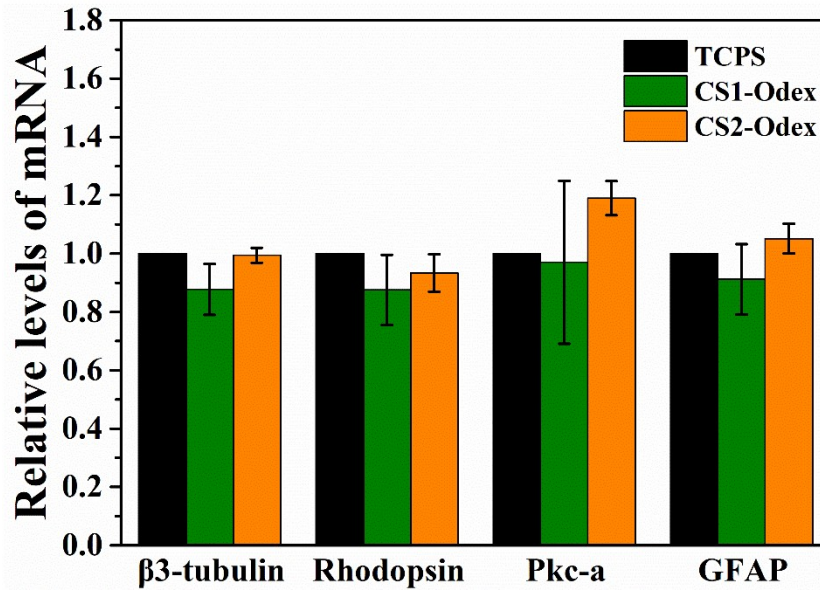


Fig. S5. Relative gene expression levels of β 3-tubulin (neuron marker), Rhodopsin (photoreceptor marker), Pkc-a (bipolar cell marker), and GFAP (glial marker) of RPCs by seeding cells on the hydrogel directly tested *via* qPCR.

Table. S1 Primers used for qPCR.

Genes	Accession number	Forward (5-3')	Reverse (5-3')	Annealing Temperature (°C)	Product size (base pairs)
Ki-67	X82786	cagtactcggaatgcagcaa	cagtcttcaggggctctgtc	60	170
Nestin	NM_016701	aactggcacctcaagatgt	tcaagggtattaggcaagggg	60	235
Vimentin	NM_011701	tggttgacaccactcaaaa	gcttttgggggtgtcagttgt	60	269
IL-6	NM_031168.1	aggagtggctaaggaccaaga	ataacgcactaggttgccga	60	100
MCP-1	NM_011333.3	acctgctgctactcattcacc	attccttcttggggtcagca	60	148
Casepase-3	NM_004346	catggaagcgaatcaatggact	ctgtaccagaccgagatgtca	60	139
β 3-tublin	NM_023279	cgagacctactgcatcgaca	cattgagctgaccaggaat	60	152
Rhodopsin	NM_145383	tcaccaccacctctacaca	tgatccaggtgaagaccaca	60	216
Pkc- α	NM_011101	cccattccagaaggagatga	ttcctgtcagcaagcatcac	60	212

GFAP	NM_010277	agaaaaccgcatcaccattc	tcacatcaccacgtccttgt	60	184
β -actin	NM_007393	agccatgtacgtagccatcc	ctctcagctgtggtggtgaa	60	152
