

Supplemental S1: (A) Blood glucose was monitored at 8 weeks of diabetes; only mice with glycemia exceeding 17 mM were considered as diabetic (n = 13), *** $P < 0.001$. Data are represented as mean \pm S.E.M. (B) Permeability was assessed to validate our STZ model as a good model of retinal permeability; STZ mice showed higher retinal permeability compared to control mice (Citrate) (n = 4, *** $P < 0.001$). Data are represented as mean \pm S.E.M. (C) Representative angiography with confocal microscopy confirmed that diabetic retina showed leaky vessels and had higher permeability (n = 4). Leaky vessels were identified and characterized by confocal microscopy (FITC Dextran). Scale bar = 200 μ m. (D) Physiological parameters presented in a polygonal graphic form; Permeability, Animal age, Retina weight, Glycemia, and Animal weight.

Data are expressed as mean \pm S.E.M.

Statistical analysis: t-test

Supplemental S2: (A) FACS analysis of HRMEC transfected with siNeg vs fluorescent siGlo green (n = 3) and qPCR analysis (B) revealed that transfection worked with an efficiency of 80% (n = 3), *** $P < 0.001$. (C) *unc5B*, *neol*, *a2br* mRNA levels in HRMEC transfected with siUnc5B, siNeo1 and siAA2BR (n = 3), * $P < 0.05$. : i. *unc5b*, *neol*, *aa2br* mRNA levels in HRMEC transfected with siUNC5B (Untreated 1.000 ± 0.1342 , siNeg 0.9392 ± 0.02002 , ns,

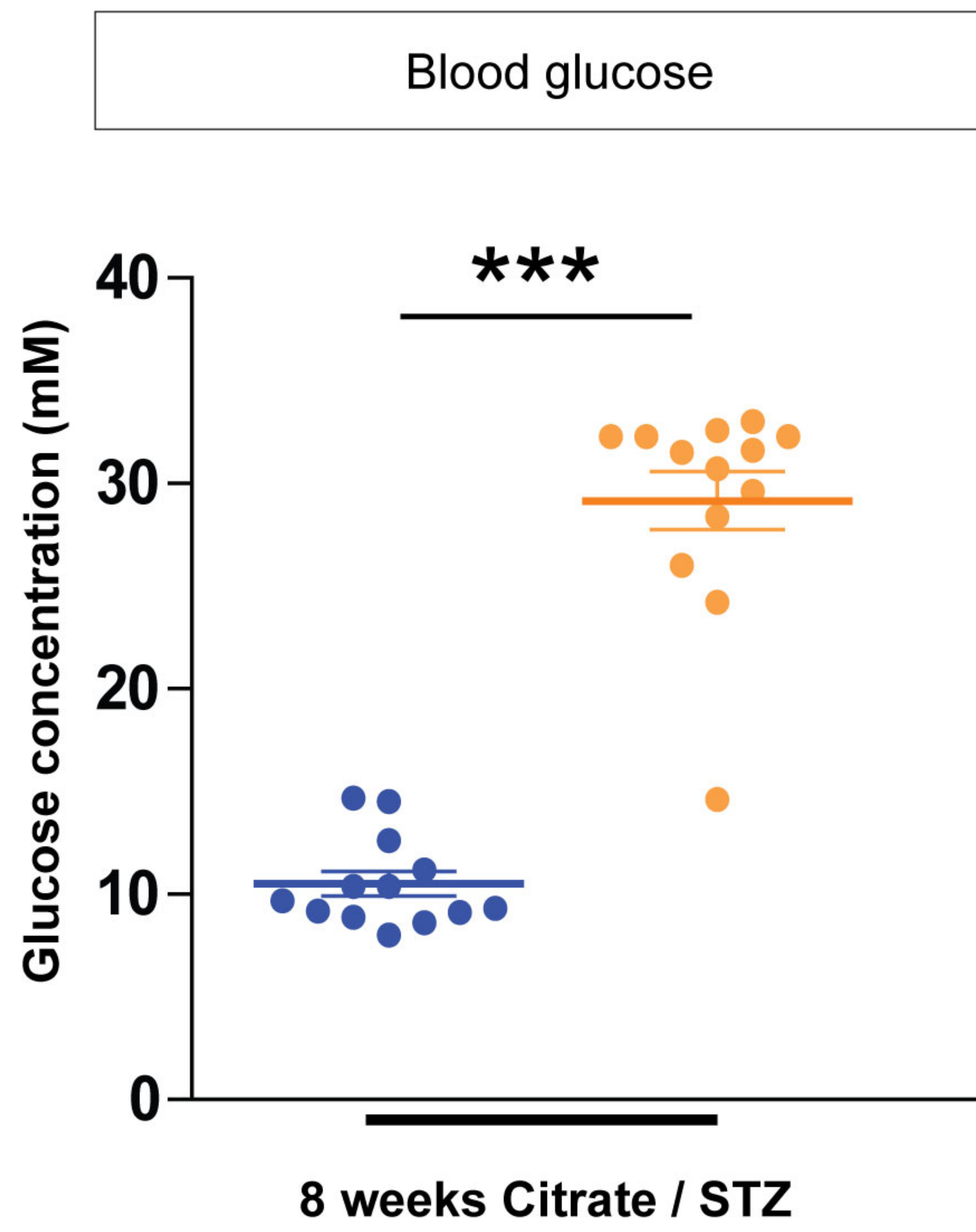
siUNC5B 0.3676 ± 0.0415 , $p < 0.05$, siNEO1 0.9582 ± 0.0421 , ns, siAA2BR 0.8292 ± 0.0386 , ns), ii. siNEO1 (Untreated 1.000 ± 0.1342 , siNeg 0.9392 ± 0.02002 , ns, siUNC5B 0.8688 ± 0.0712 , ns, siNEO1 0.2920 ± 0.0990 , $p < 0.05$, siAA2BR 0.7972 ± 0.0373 , ns) and iii siAA2BR (untreated 1.000 ± 0.1342 , siNeg 0.9392 ± 0.02002 , ns, siUNC5B 1.069 ± 0.2003 , ns, siNEO1 0.7453 ± 0.0829 , ns, siAA2BR 0.2666 ± 0.0696 , $p < 0.01$ ns)

Data are expressed as mean \pm S.E.M.

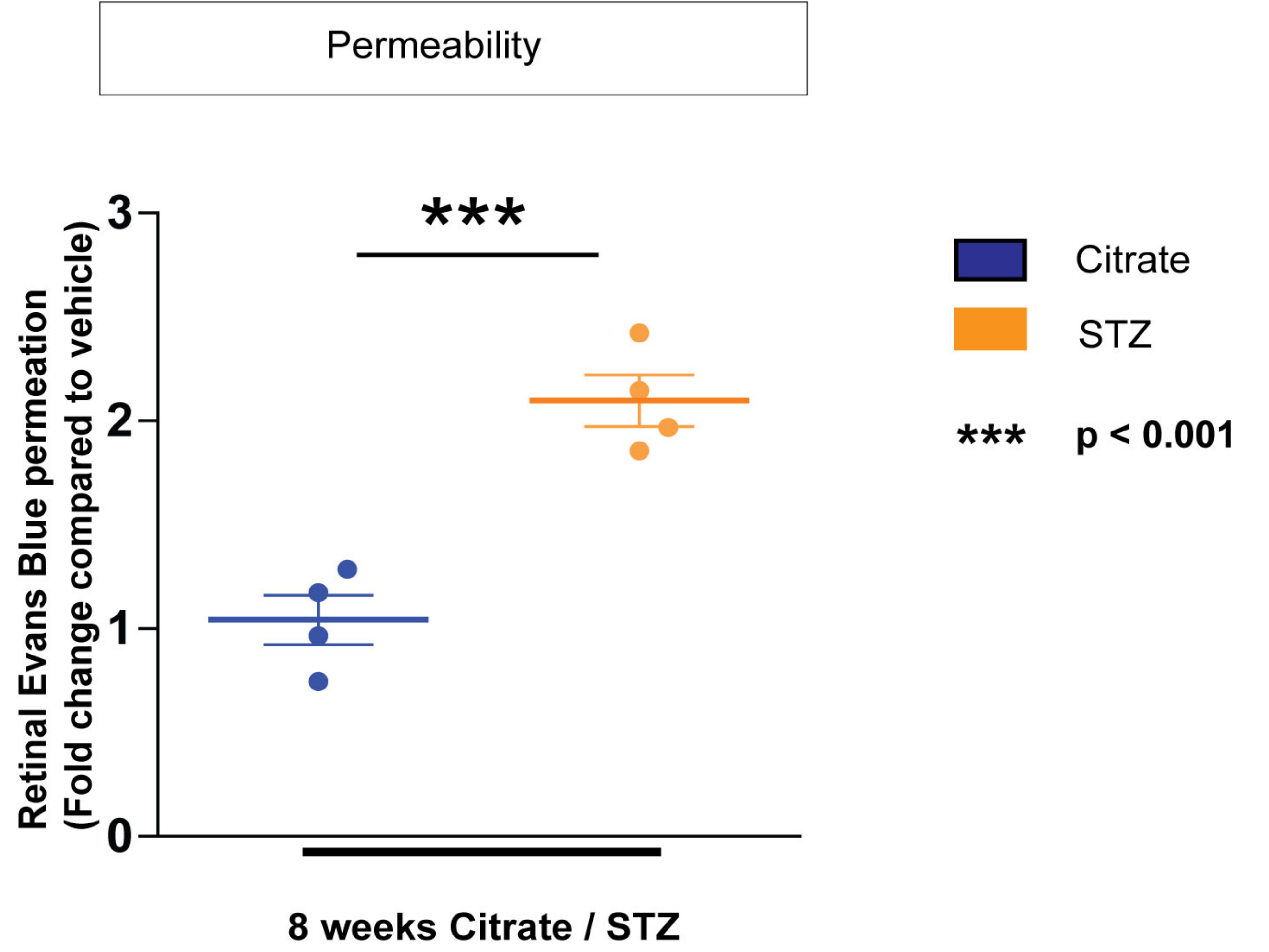
Statistical analysis: One way Anova with posthoc Tukey

Figure S1

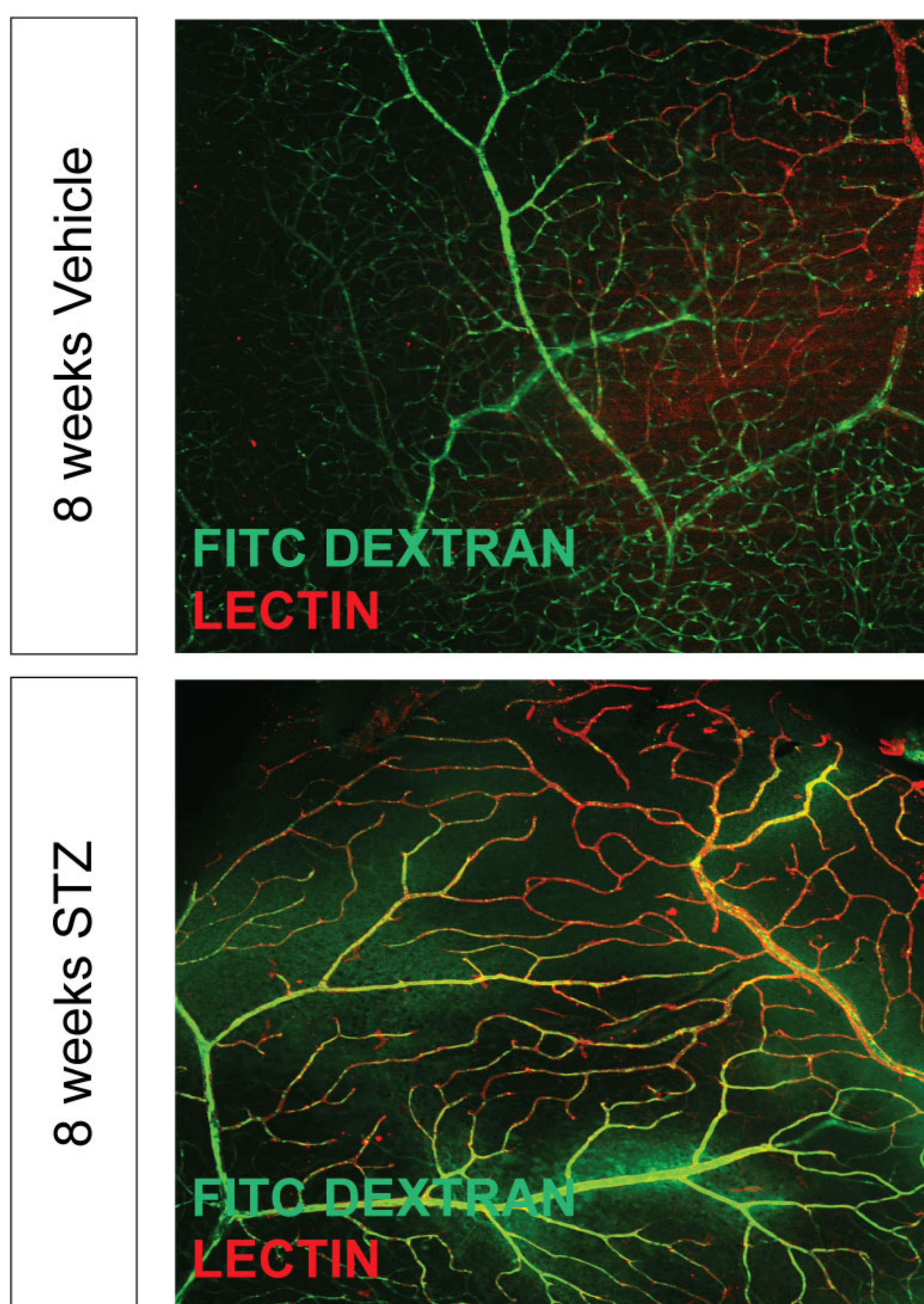
A



B



C



D

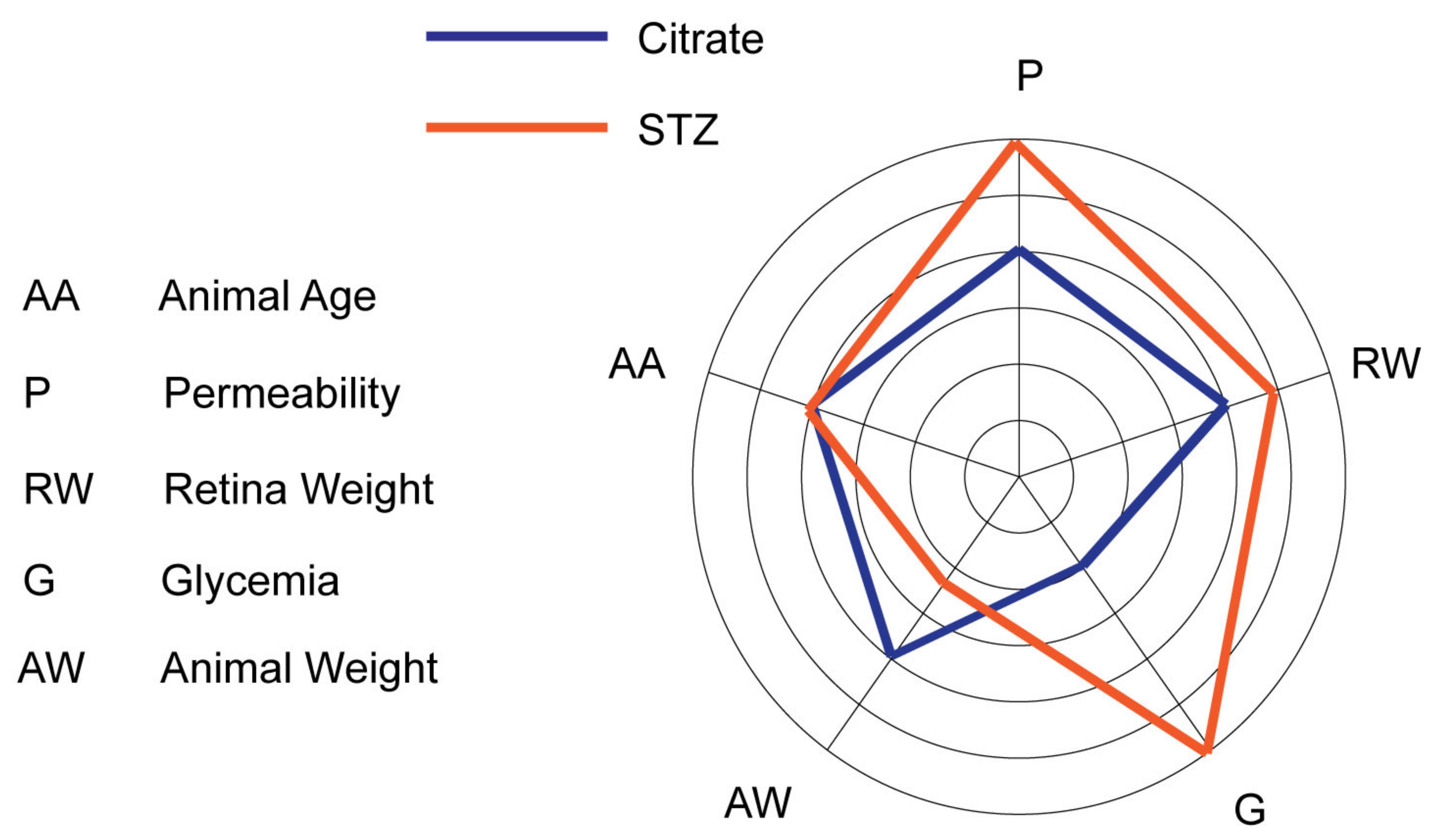
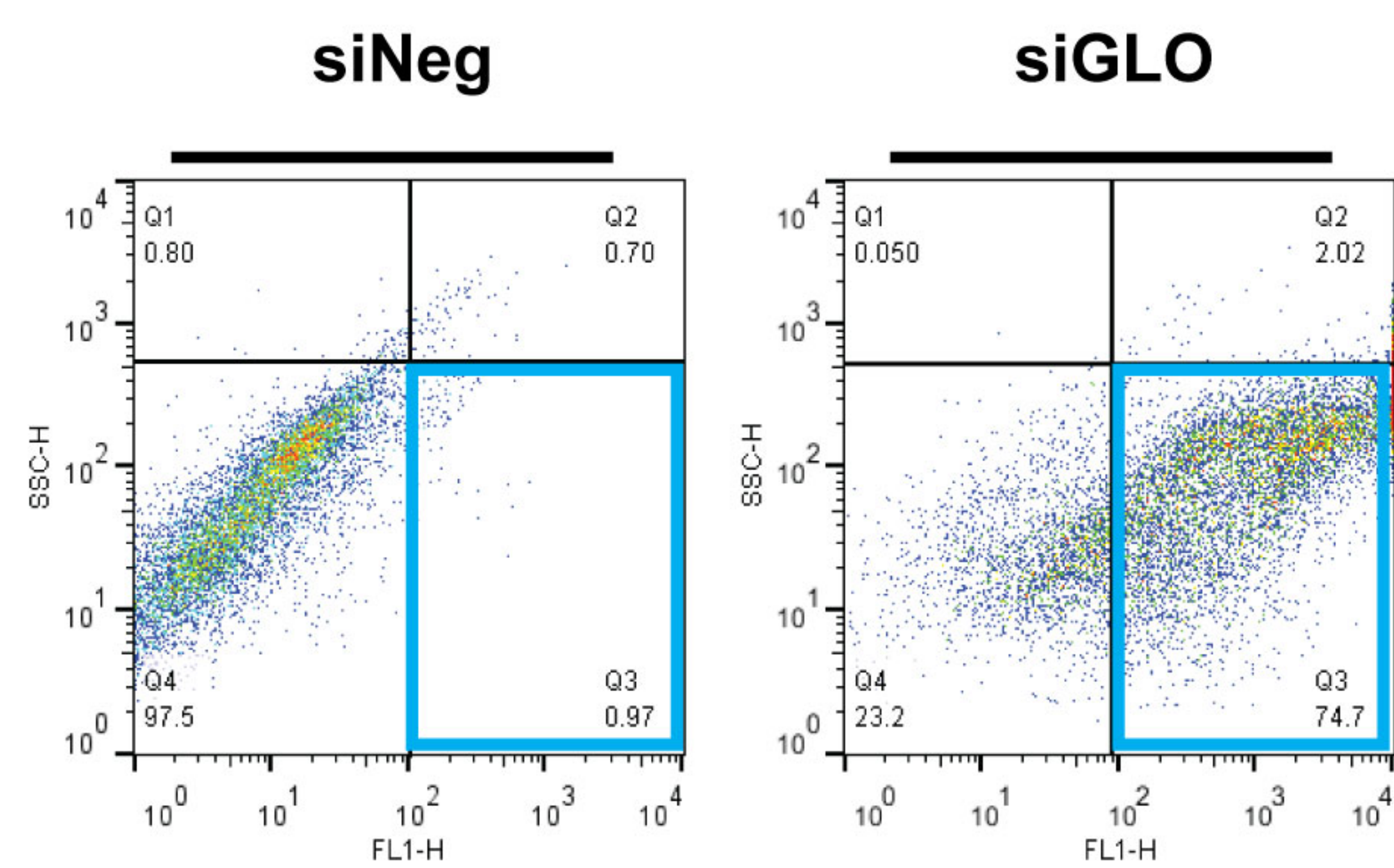
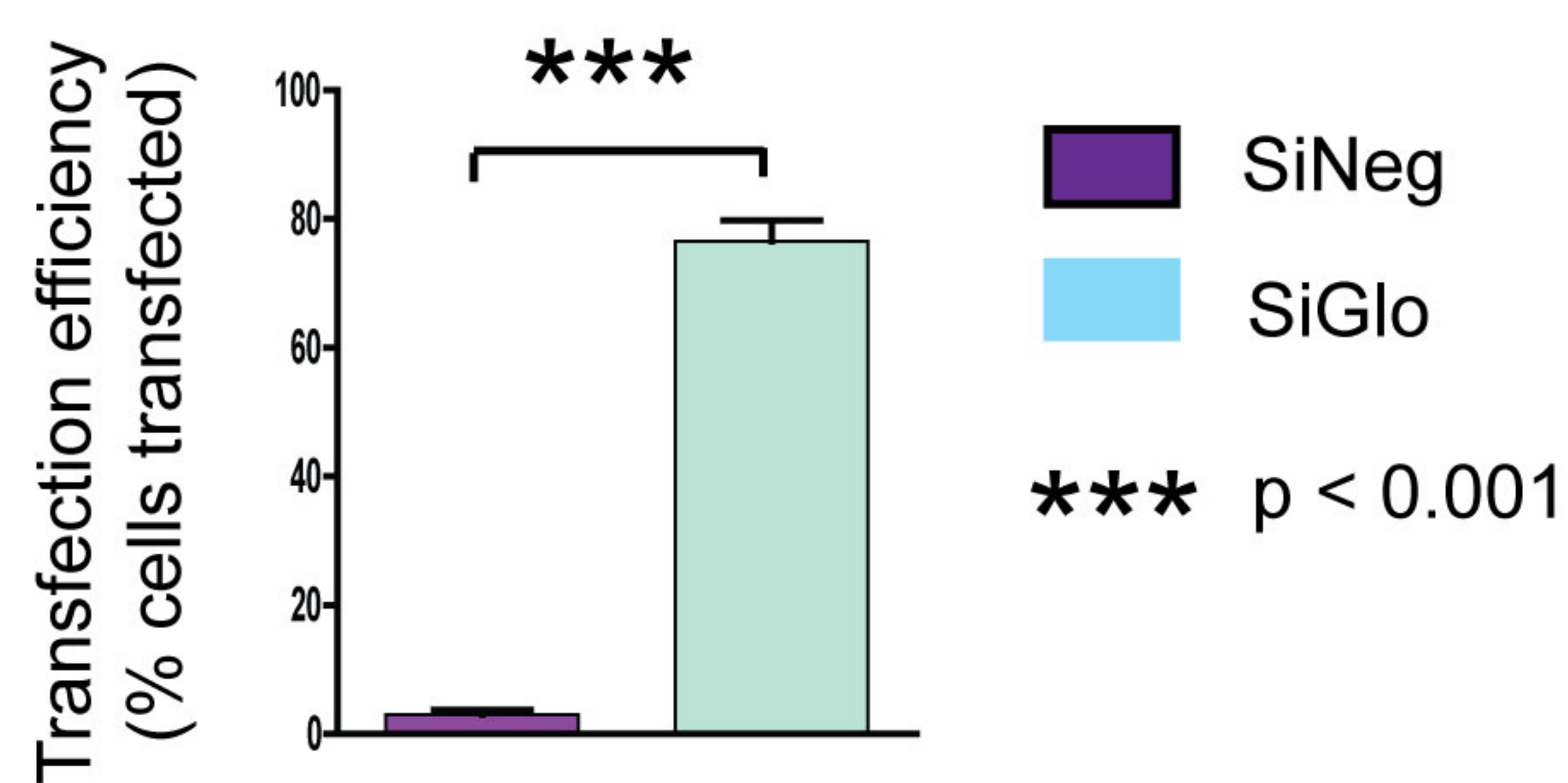


Figure S2

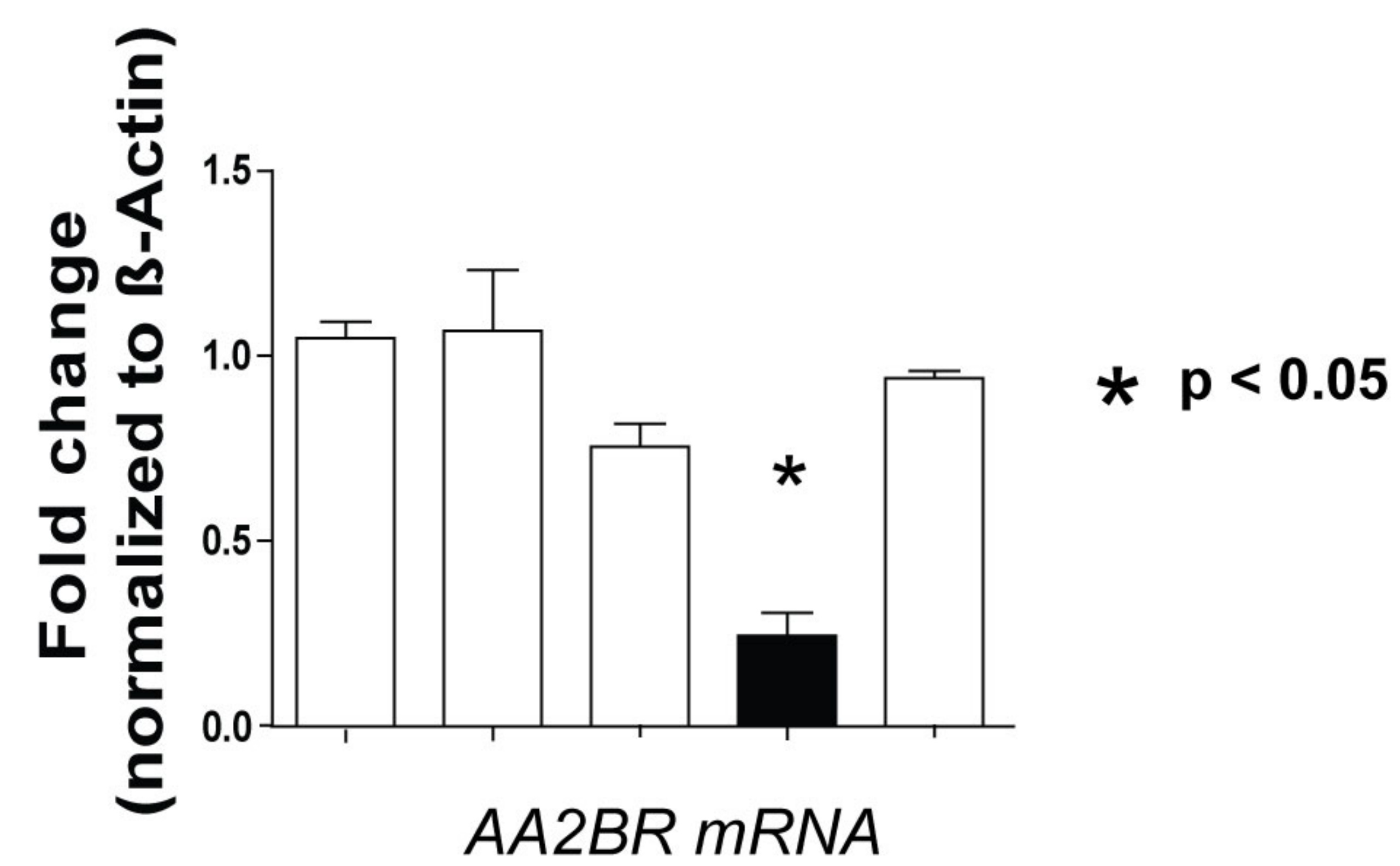
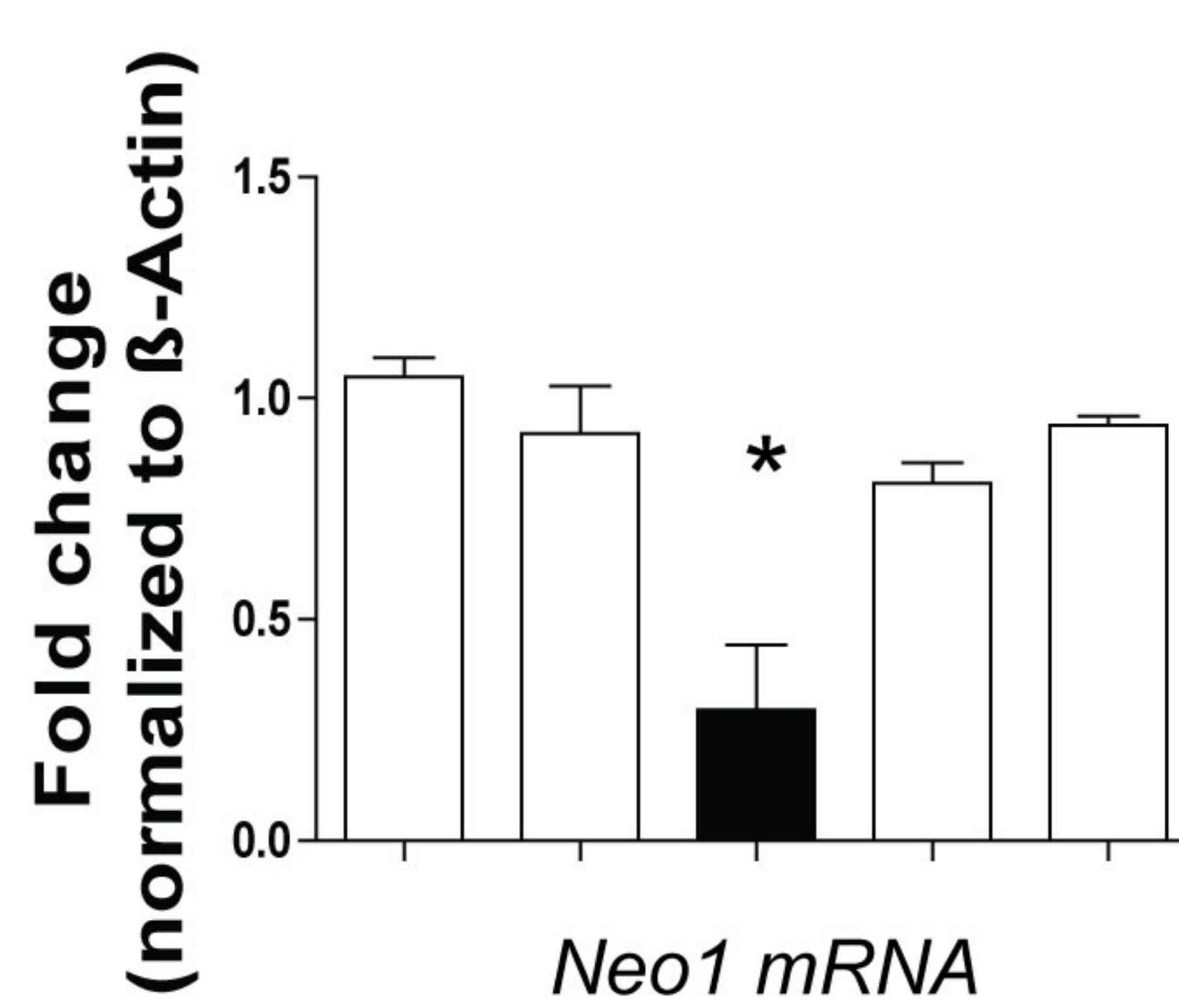
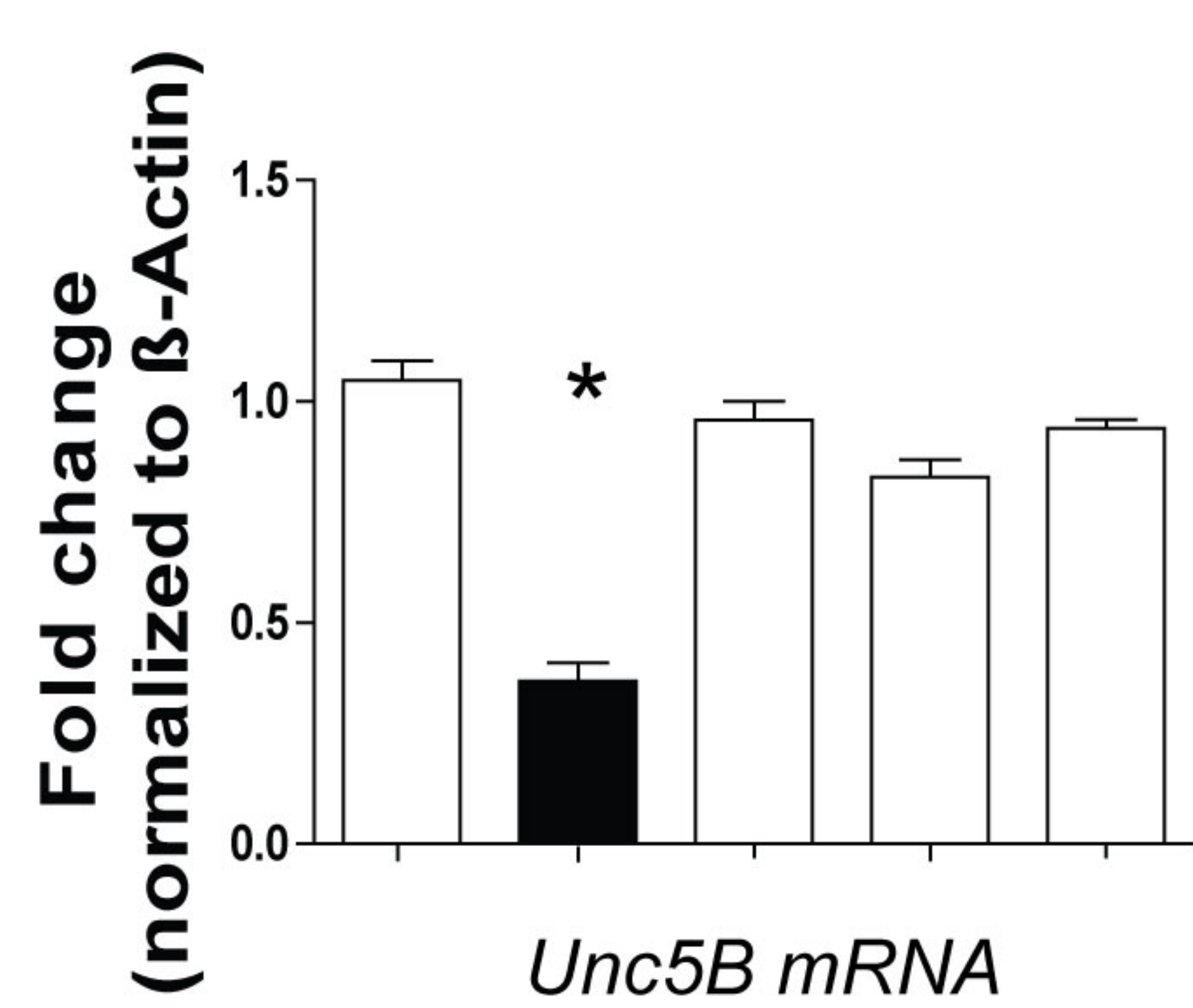
A



B



C



Untreated	+	-	-	-	-	+	-	-	-	-	+	-	-	-	-	+	-	-	-
siUNC5B	-	+	-	-	-	-	+	-	-	-	-	+	-	-	-	-	-	-	-
siNEO1	-	-	+	-	-	-	-	+	-	-	-	-	+	-	-	-	-	-	-
siAA2BR	-	-	-	+	-	-	-	-	+	-	-	-	-	+	-	-	-	-	-
siNeg	-	-	-	-	+	-	-	-	-	+	-	-	-	-	+	-	-	-	-