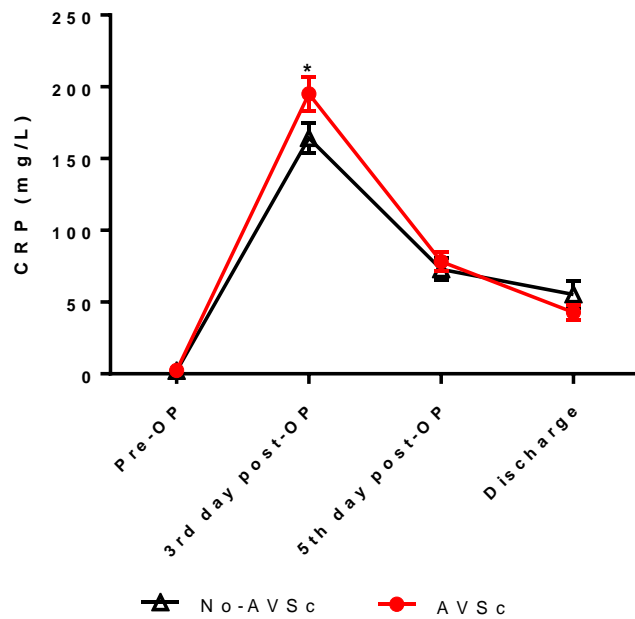
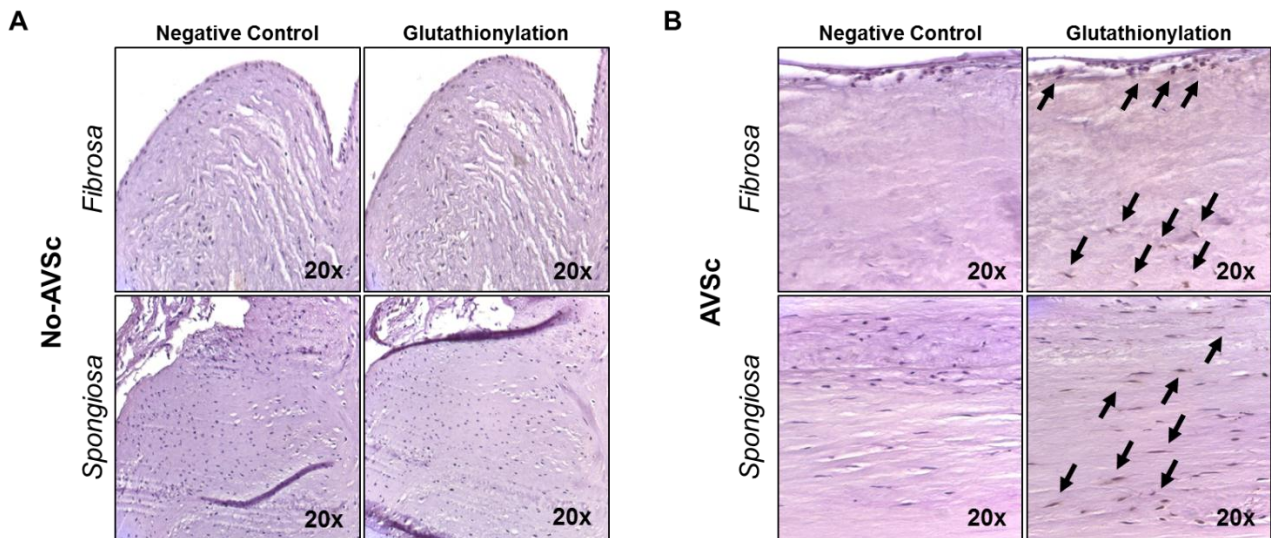


Supplemental Figure S1.



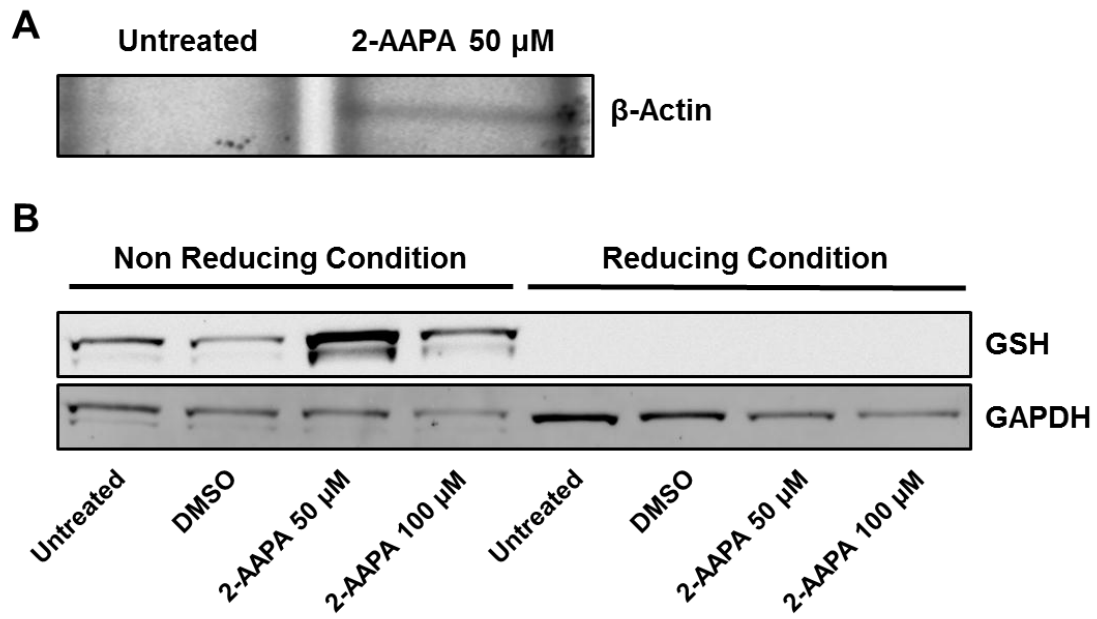
Systemic inflammation status. Graph representing C-reactive protein (CRP) levels measured in clinical routine preoperatively, at 3rd-day post-surgery, at 5th-day post-surgery, and at discharge. Black line denotes patients with normal aortic valve leaflets (No-AVSc; n = 29), while red line denotes patients with increase aortic valve leaflet thickness (AVSc; n = 29). * p < 0.05.

Supplemental Figure S2.



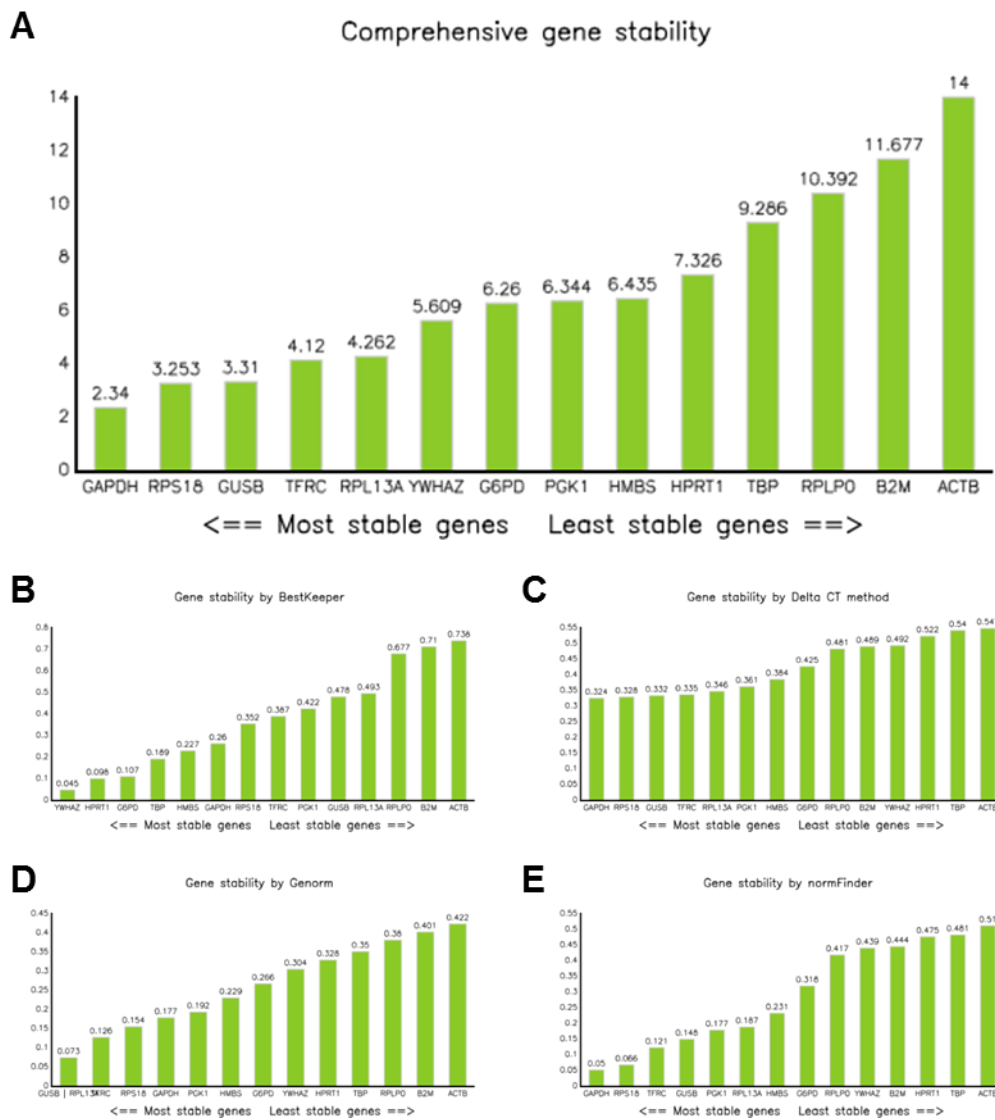
Protein S-glutathionylation in aortic valve leaflets. (A-B) Immunohistochemistry showing glutathione (GSH) expression in *Fibrosa* and *Spongiosa* layers of the aortic valve (A) in patients with normal aortic valve leaflets (No-AVSc) and (B) in patients with increased aortic valve leaflets thickness (AVSc). Black arrows indicate positive cells for GSH staining.

Supplemental Figure S3.



S-Glutathionylation of β -actin. (A) Immunoprecipitation of glutathione (GSH) and Western blot for β -actin in HUVEC treated with 2-AAPA 50 μ M for 4 hours and 24 hours of recovery. (B) Western blot showing GSH in non-reducing and in reducing conditions in HUVEC untreated, treated with DMSO, 2-AAPA 50 μ M, and 2-AAPA 100 μ M.

Supplemental Figure S4.



Comprehensive gene stability. (A) Histograms showing the evaluation of comprehensive gene stability comparing untreated vs. 2-AAPA 50 μ M cells ($n = 3$) assessed by following different algorithm: (B) Bestkeeper; (C) Delta CT method; (D) Genom; and (E) Normfinder.