

ONLINE SUPPLEMENTAL MATERIAL

FIGURE S1. **Zebrafish *decorin***. *A*, amino acid alignment of human, mouse and zebrafish *decorin*. Alignment was constructed in Jalview (Clamp, M., Cuff, J., Searle, S. M. and Barton, G. J. (2004), "The Jalview Java Alignment Editor," *Bioinformatics*, 20, 426-7). Shading corresponds to percent identity among species. *B*, zebrafish *decorin* exon organization. *C*, zebrafish *decorin* is a chondroitin sulfate proteoglycan despite harboring the heparan sulfate attachment/consensus sequence, SGD. Compare the highlighted sequence from zebrafish *decorin* to a heparan sulfate attachment sequence found in human perlecan and to the predicted heparan sulfate attachment/consensus sequence. Note also the presence of shared amino acid residues upstream and downstream of the main SGD consensus. The corresponding region from human decorin is shown for comparison.

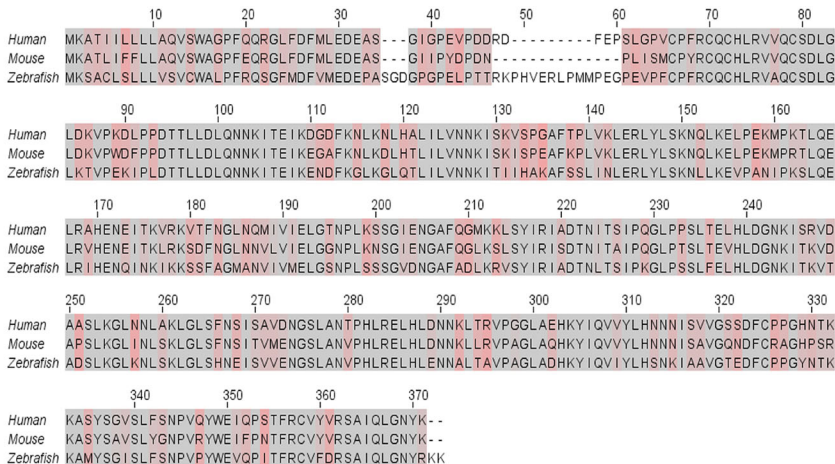
FIGURE S2. **Zebrafish *decorin* functional analysis**. *A*, conditioned media from 293-EBNA cells synthesizing zebrafish *decorin* binds collagen, fibronectin and laminin. *B*, Two-h treatment with zebrafish decorin decreases EGFR tyrosine kinase levels in HeLa cells. *C*, Zebrafish decorin inhibits tumor cell proliferation (***, $p = 0.001$). Panel *C* represents one of two independent experiments. *D*, Zebrafish decorin increases tumor cell apoptosis after a 24 h treatment (***, $p = 0.001$). The values presented in *C* and *D* represent the mean \pm S.E. ($n = 6$).

FIGURE S3. **Zebrafish *decorin* expression profile**. A similar pattern of decorin expression has been determined by gene expression profiling (1).

FIGURE S4. **Zebrafish *decorin* immunohistochemistry**. Panel *A* represents immunostaining of 4 hpf uninjected embryos with anti-decorin antibody, and panel *B* represents immunostaining of injected embryos without primary antibody. *C*, human decorin proteoglycan can be detected by immunostaining of cryosections of 4 hpf injected embryos with goat anti-human decorin. Regions positive for decorin correspond to the Rhodamine (red) signal and nuclei are stained with DAPI (blue). Notice the pericellular localization of human decorin (white arrows). *Bar*, 25 μ m.

References

1. Ouyang, M., Garnett, A. T., Han, T. M., Hama, K., Lee, A., Deng, Y., Lee, N., Liu, H.-Y., Amacher, S. L., Farber, S. A., and Ho, S.-Y. (2008) *Gene Expr. Patterns* **8**, 171-180

A**B**

Exon	Nucleotides	Amino Acids
1	1-267	1-83
2	268-378	84-120
3	379-591	121-191
4	592-708	192-230
5	709-801	231-261
6	802-942	262-308
7	943-1140	309-373

C

Human decorin:	EDEA SG IGPE
Zebrafish decorin:	EDEPA SGD GPG
Human perlecan:	DLG SGD LGS
Predicted HS:	EDE GSGD GP

Figure S1

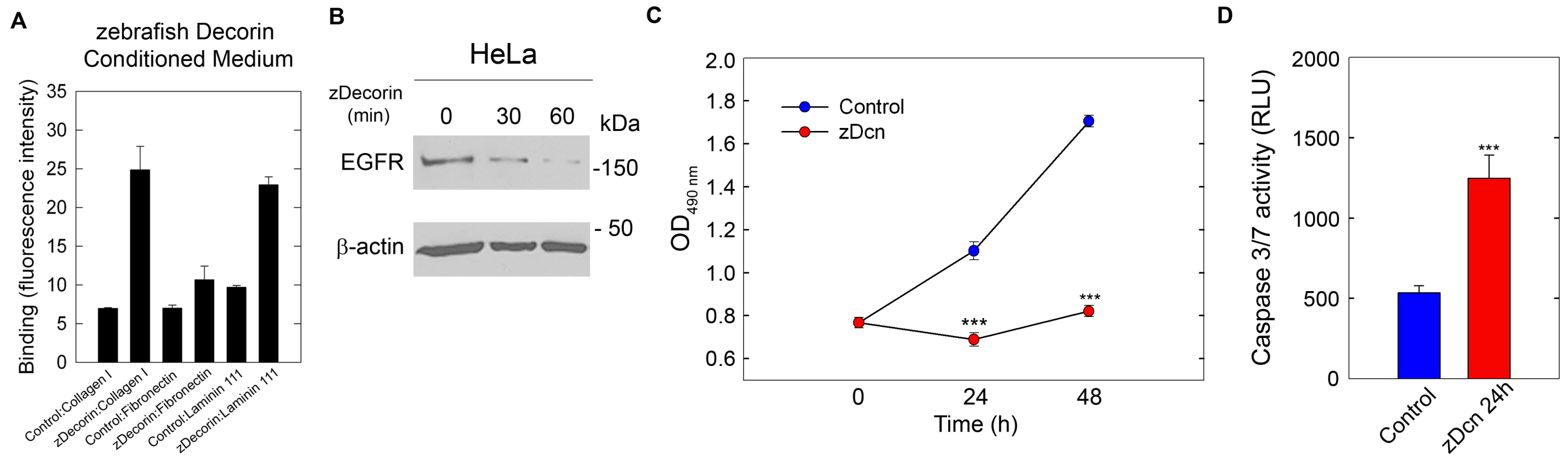


Figure S2

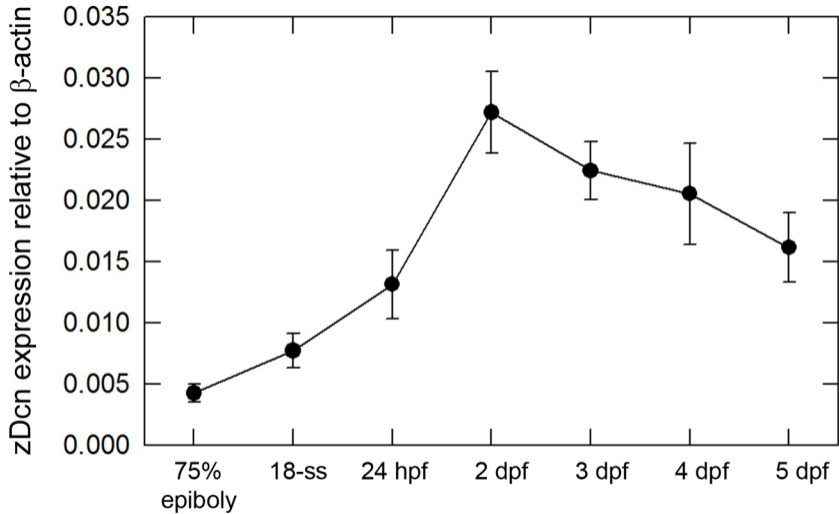


Figure S3

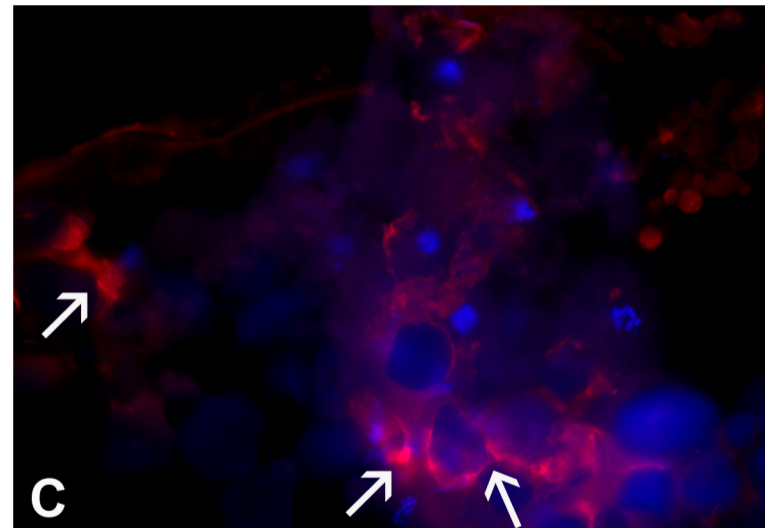
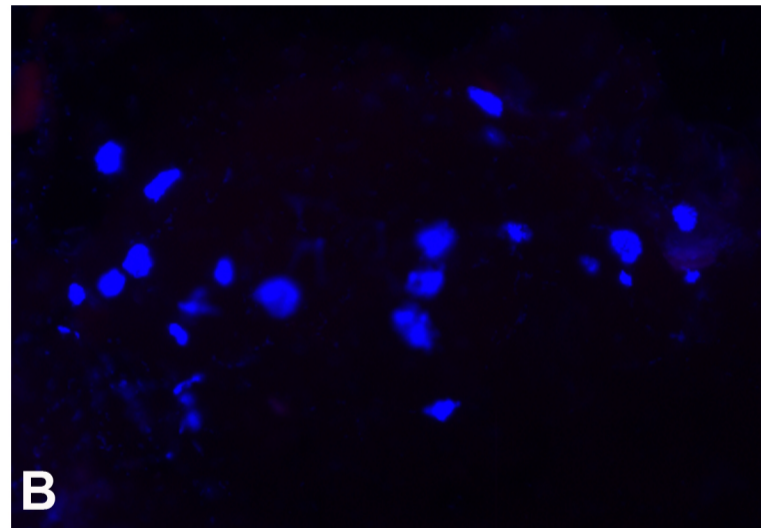
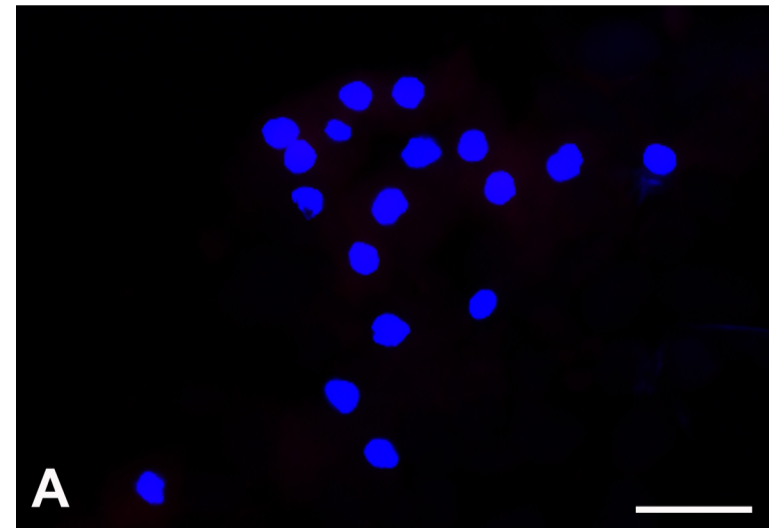


Figure S4