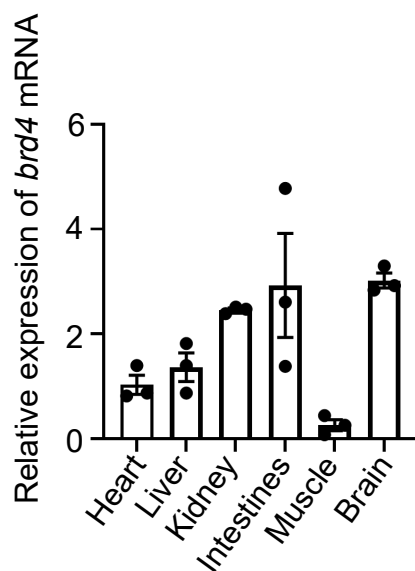
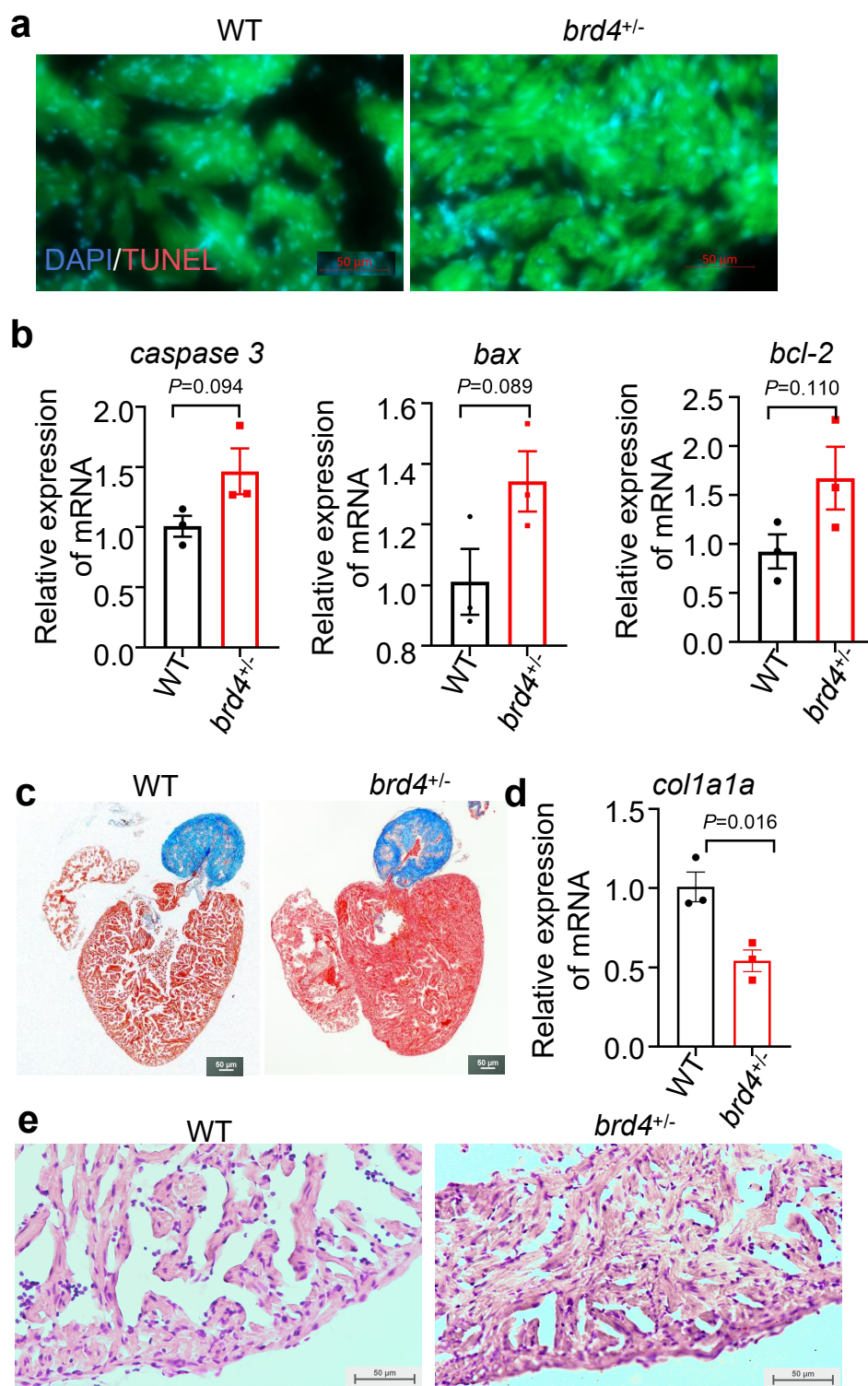




Supplemental Figure S2. *brd4* gene is ubiquitously expressed in adult zebrafish
Quantitative RT-PCR to examine expression of *brd4* in major organs including heart, liver, kidney, skeletal muscle and brain in adult zebrafish. n=3, biological replicate.



Supplemental Figure S3. Evaluation of apoptosis and fibrosis-related changes in adult *brd4*^{+/-} zebrafish hearts.

a Representative images of TUNEL staining (green) with DAPI nuclear counterstaining (blue) in ventricular sections from *brd4*^{+/-} and WT adult zebrafish hearts. Scale bar, 50 μm. **b** Quantitative RT-PCR analysis of apoptosis-related genes, including *caspase 3*, *bax*, and *bcl-2*, in *brd4*^{+/-} and WT hearts. *n*=3, biological replicates, Student's *t*-test. **c** Representative Masson's trichrome staining of heart sections from *brd4*^{+/-} and WT control hearts. Scale bar, 100 μm. **d** Quantitative RT-PCR analysis of the fibrosis-associated gene *col1a1a* expression in *brd4*^{+/-} hearts compared to WT controls. *n*=3, biological replicates, Student's *t*-test. **e** Representative H&E staining images of ventricular sections from *brd4*^{+/-} and WT control hearts. Scale bar, 50 μm.

Supplemental Table 1. Primer sequences (5'→3')

For zebrafish qRT-PCR		
<i>β-actin</i>	GGCTTCTGCTCTGTATG	AACGCTTCTGGAATGACTAA
<i>brd4</i>	AAGCCCAAGCCCAAACCCTAAAC	CTCCTTCTCCGCTCCTGCTCTC
<i>anp</i>	AGCCGTAGATTATGAAGACAGCAAC	TTTCTCTGTGTGTCAAATCCATCCG
<i>bnp</i>	TGAAGAGCAGCCCGATACTTACC	ACATCCCAAAGACGACATTGAACC
<i>caspase-3</i>	TCAGTCACGGCGATGAGGGCCT	CGACAAGCCTGAATAAAGAAC
<i>bax</i>	GACTTGGGAGCTGCACTTCT	TCCGATCTGCTGCAAACACT
<i>bcl-2</i>	CACTGGATGACTGACTACCTGAA	CCTGCGAGTCCTCATTCTGTAT
<i>col1a1a</i>	CTGCGAGGACACAAGCGACTG	CTCAACACTGGGCTCCTGGAAATC
<i>flna</i>	CGAGCAGCAGCCGTGTTC	ATGATGTCACCCTGTTCTGTATCTG
<i>flnb</i>	CTGTTGGTGCTGATTCTGGAATGC	AGGAGCCGTCATTATGGTCATCAC
<i>col6a3</i>	ACCTACCACTTCCACAACCATAGC	ATTCCGAGTTCCATCCGATCCATC
<i>col4a6</i>	TCCATCTCAACCAATCGCTGTCC	TCCATCTCAACCAATCGCTGTCC
<i>hcn4</i>	GCGATCATGGAGACGGACAT	CTACATCCGAGTCGTGGACG
<i>dsg2</i>	GTCGCGTTCTCTGCTTTGTTT	ATCTGTGGAGGGACGATCCA
For zebrafish ChIP-qPCR		
<i>flna</i>	GATGGAGGAGCAGATACAGAACAGG	GCTGGAGCTGACGTGATACCG
<i>flnb</i>	CTCATAAAGGTTTGGGACCACTTGG	AACTTGCCTTGCTTTGCATAGTCTG
<i>col6a3</i>	GGAAATGTCCGTCAAATCCTCTTGG	TCCTGTGCCTGTGCCATCAAC
<i>col4a6</i>	TGTCCCAGGTGCTTTATTGAGTCAG	AAATCGTCCTCCGCCACTACAC
<i>hcn4</i>	CTGCTCGATATGGGGCTCAG	ACAGTGACATTTCCGCCACT
<i>dsg2</i>	CGAGTTGGCAAAATGCAATGTA	GGAGAAAGGGGTGGGGAAAG
For HEK293T cell qRT-PCR		
<i>β-actin</i>	CCACGAAACTACCTTCAACTCCATC	AGTGATCTCCTTCTGCATCCTGTC
<i>BRD4</i>	GCCGAGAGGACGAGGATGC	TGTTGCTGCTGCTGCTGTTG
For HEK293T cell ChIP-qPCR		
<i>FLNA</i>	TTGAACTCCTGACCTCGTGATCC	GCGGTGGTTCATGCCTGTAATC
<i>FLNB</i>	CAACATGGTGAAAGCCCGTCTC	CAATTCTCTTGCCTCAACCTCCTG
<i>COL6A3</i>	AGAGAGGATGAGGGCAGAGAATTG	GCAGAGGCTCCGAGTATAGAACC
<i>COL4A6</i>	TTCAGCACCCGCACGAAATTC	CCAAGCCTCACTGTCCCTCTC