

### Supplementary Fig. 1

Expression of endogenous COX-2 and COX-1 in tissues of transgenic and control fetuses. Various tissues from E18.5 transgenic (T) and control (C) littermates were isolated and analyzed by western blot analysis with antibodies which are specific for mouse COX-2 and COX-1. Mouse-specific COX-2 antibody cross-reacted with the high level of human COX-2 in heart lysate from transgenic fetus. The membrane was stripped and reprobed for GAPDH to confirm equal loading.

### Supplementary Fig. 2

(A) TUNEL staining on transverse sections of E10.5 control (CT) and transgenic (TG) littermates (magnification, X40). NT, neural tube. (B) Graphical presentation of TUNEL-positive cells in the sclerotome from serial sections of control and transgenic littermates (n=3).

### Supplementary Fig. 3

Immunohistochemical staining of cleaved caspase-3 (A) and human COX-2 (B) on sections of E10.5 control (CT) and transgenic (TG) hearts (magnification, X10). Note the absence of cleaved caspase-3 staining in heart of transgenic embryo where strong COX-2 expression was observed.

### Supplementary Fig. 4

Immunofluorescence staining of cleaved caspase-3 (green) and COX-2 (red) on transverse sections of E10.5 control (CT) and transgenic (TG) littermates using confocal microscopy (magnification, X40). Nuclei were stained with DAPI (blue). NT, neural tube.