

Table S1. D/V patterning defects in Z and MZ *bmp4* mutants

Genotype	Wild type (%)	Ventral fin defect (%)	Ventral fin and cloaca defect (%)	<i>n</i>
Z <i>bmp4</i> Y180*/+ IX	91	8	1	772
Z <i>bmp4</i> S355*/+ IX	71	25	4	284
Z <i>bmp4</i> C365S/+ IX	80	19	1	718
MZ <i>bmp4</i> Y180* ^{-/-}	0	77	23	426
MZ <i>bmp4</i> S355* ^{-/-}	61	35	4	344
MZ <i>bmp4</i> C365S ^{-/-}	38	59	3	281

Presence and morphology of the ventral fin and correct development of the cloaca (Esterberg et al., 2008; Stickney et al., 2007) were scored in Z and MZ *bmp4* mutants. Percentages for zygotic in-crosses contain both mutant and sibling populations. Morphological defects are not completely penetrant in mutants and are partially dominant in the S355* and C365S alleles.

Additional reference

Esterberg, R., Delalande, J. M. and Fritz, A. (2008). Tailbud-derived Bmp4 drives proliferation and inhibits maturation of zebrafish chordamesoderm. *Development* **135**, 3891-3901.