



hwa^{tsu32c/+} (CZRC catalog ID: CZ1228)

Nature of the mutation

The *hwa* mutant line *hwa*^{tsu32c}, in which exon 1 of the *hwa* locus harbors a 33bp insertion, a 1bp deletion, and a 1bp substitution allowing a premature stop codon to appear at the 36th codon. *Mhwa*^{tsu32c} mutant embryos at 24 hpf exhibited a calabash- or onion-like shape without the major body axis in addition to alterations of the dorsal and ventral marker expression pattern.

Sense Strand Sequence

cacaccgaagacaccctgataaatgaggtgaagaacctaaaattaaactgttgtaaactcacgcggtgaaaagccaggaatctctccac
gctcctgccGAAATTAATTGATGTAAATGGAGCGCAGCTGCGACTCAACTGTGCGACTTT
GCTCAGTTTTAGTGATTTTATACTTACTATTTTACATAAACTAACATTAATAACCACG
GGTGAAAATAAAGCAGACGTCAAATCATTGTTTTATCTTTGATTTGTGATGAAATG
TCGCAGCTGGGATCGGCTGT**GCCCTCATCAA**ACTTACCTGAGGGCCTCCCGGTGTC
CAGTTTGGCGCTGCTGATCCTGGTGCTCATCCATGCGTGCTGCTGCTCCTGCTGCT
AAATTGTTTGTGTTGTGGGCTACAACTGTTCCGGATGACCCGGAGAAAGAGAGAC
CGATACGGGTCCGAGATGTCGCTCATGCACTCTT**CATATCCACCCGCCAGAGG**

Uppercase: Exon/coding sequence

Lowercase: intron/noncoding sequence

atcg: Forward/Reverse primer

atcg: Crisper/cas9 target site

Genotyping assay

Primers:

CZ1228_forward: 5'-CACACCGAAGACACCCTGAT-3'

CZ1228_reverse: 5'-CCTCTGGCGGGTGGAAATATG-3'





国家水生生物种质资源库国家斑马鱼资源中心
China Zebrafish Resource Center (CZRC)
National Aquatic Biological Resource Center (NABRC)

PCR program:

95°C 5min
95°C 30sec
60°C 30sec
72°C 30sec
95°C 10min
4°C hold

} 30 cycles

Product size: 486p

Reference:

Yan, L., Chen, J., Zhu, X., Sun, J., Wu, X., Shen, W., Zhang, W., Tao, Q., Meng, A. (2018)
Maternal Huluwa dictates the embryonic body axis through β -catenin in vertebrates. *Science*
(New York, N.Y.). 362(6417)

