国家斑马鱼资源中心 CHINA ZEBRAFISH RESOURCE CENTER
地址：武汉市武昌区东湖南路 7 号　　邮编：430072
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zar1$^{gd6/+}$（AB） (CZRC catalog ID: CZ 285)

Nature of the mutation

Between 639 bp to 643 bp of the wild-type ***zar1*** coding sequence, CAA, is mutated into T in exon 1. The mutated zar1codes for a truncated protein containing 213 aa, of which 329 aa are identical to wildtype zar1.

Sense Strand Sequence

TACTCCCCAGTAGAATCCCGGAGACTAGTGTCCCTCTTCAGAGAGGAGGGTGAAGAA
GAGGAGGACACGGATCTCGAGGTCACAGAGACGGTTGACAGCGCAGAGAAGCTGGA
AAGCGCCGAGAAAAACGTGCGCAAACAGGGTAAGAAAAGCGCGAAGCAACCGCTTA
GTCCAGAGAAAAATATAAACAAGCAGACTGAAACAAATGAGGAGAACACAAACGAG
CCAGTGAAAACCGAACAAGACGATCTGAAGTCCAAGGCTCGTGTGAGATTTCAGgtgac
attaatttattctcatagcatatatatgaaacttaatcgacgtgtgtttt

Uppercase: Exon/coding sequence
Lowercase: intron/noncoding sequence
atcg : Forward/Reverse primer

Genotyping assay

Primers:
gd6_forward: 5' TACTCCCCAGTAGAATCCCG 3'
gd6_reverse: 5' AAAACACACGTCGATTAAGT 3'

PCR program:

95℃ 5min
95℃ 30 sec
60℃ 30 sec } 30 Cycles
72℃ 30 sec
72℃ 8min
4℃ hold

Product size: 334 bp

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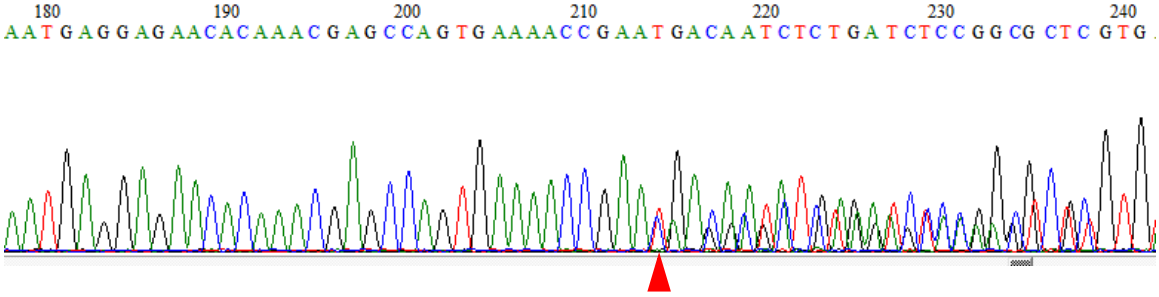
The sequencing results of the CZ285(+/-):

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CLUSTAL format alignment by MAFFT FFT-NS-i (v7.215)

WT              TACTCCCCAGTAGAATCCCGGAGACTAGTGTCCCTCTTCAGAGAGGAGGGTGAAGAAGAG
CZ285           TACTCCCCAGTAGAATCCCGGAGACTAGTGTCCCTCTTCAGAGAGGAGGGTGAAGAAGAG
                ************************************************************

WT              GAGGACACGGATCTCGAGGTCACAGAGACGGTTGACAGCGCAGAGAAGCTGGAAAGCGCC
CZ285           GAGGACACGGATCTCGAGGTCACAGAGACGGTTGACAGCGCAGAGAAGCTGGAAAGCGCC
                ************************************************************

WT              GAGAAAAACGTGCGCAAACAGGGTAAGAAAAGCGCGAAGCAACCGCTTAGTCCAGAGAAA
CZ285           GAGAAAAACGTGCGCAAACAGGGTAAGAAAAGCGCGAAGCAACCGCTTAGTCCAGAGAAA
                ************************************************************

WT              AATATAAACAAGCAGACTGAAACAAATGAGGAGAACACAAACGAGCCAGTGAAAACCGAA
CZ285           AATATAAACAAGCAGACTGAAACAAATGAGGAGAACACAAACGAGCCAGTGAAAACCGAA
                ************************************************************

WT              CAAGACGATCTGAAGTCCAAGGCTCGTGTGAGATTTCAGgtgacattaatttattctcat
CZ285           T--GACGATCTGAAGTCCAAGGCTCGTGTGAGATTTCAGgtgacattaatttattctcat
                .  ************************************************************

WT              agcatatatatgaaacttaatcgacgtgtgtttt
CZ285           agcatatatatgaaacttaatcgacgtgtgtttt
                **********************************
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Reference:

Miao, L., Yuan, Y., Cheng, F., Fang, J., Zhou, F., Ma, W., Jiang, Y., Huang, X., Wang, Y., Shan, L., Chen, D., Zhang, J. (2016) Translation repression by maternal RNA binding protein zar1 is essential for early oogenesis in zebrafish. Development 144(1):128-138