

tgfb1a^{tsu5td/+} (CZRC catalog ID: CZ407)

Nature of the mutation

Between 92 bp to 96 bp of the wild-type *tgfb1a* coding sequence, TGAGG is deleted in exon 1. The mutated *tgfb1a* codes for a truncated protein containing 34 aa, of which 377 aa are identical to wildtype *tgfb1a*.

Sense Strand Sequence

```
ttcatttttccttgctcgtcgtggacagtttggtcgctacatttcagcattATGAGGTTGGTTTGCTTGGGTGTGACCGCC  
CTGTGTTTGGTCACGGGAACGGGCAGCATGTCCACCTGTAAGACTCTGGATTTGGAG  
GTGGTGAGGAAGAAGCGGATTGAGGCTATTCGGGGTCAGATCCTCAGTAAACTGCGC  
ATGGCTAAAGAGCCTGAATCCGGAGCGGACGACGACGGACAGAAGATCCCGGATTC  
CTTGCTTTCGTTATATAATAGCACTGTTGAACTGAGCGAAGAAATGAAGACGAAGAT  
CGTCCCTGTGCAGGATGAGGATGAGGACTATTTGGCAAGGAGGTGCATAAGTTCGT  
CTTCCAGCAAG
```

Uppercase: Exon/coding sequence

Lowercase: intron/noncoding sequence

atcg: Forward/Reverse primer

Genotyping assay

Primers:

CZ407_forward: 5' CATTATGAGGTTGGTTTGCT 3'

CZ407_reverse: 5' CTCCTTGCCAAAATAGTCCT 3'

PCR program:

95°C 5min

95°C 30 sec

58°C 30 sec

72°C 30 sec

72°C 8min

4°C hold

} 30 Cycles

Product size: 304 bp

The sequencing results of the CZ407:

CLUSTAL format alignment by MAFFT FFT-NS-i (v7.397)

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WT          ATGAGGTTGGTTGCTTGGTGCTGACCGCCCTGTGTTTGGTCACGGGAACGGGCAGCATG
CZ407       ATGAGGTTGGTTGCTTGGTGCTGACCGCCCTGTGTTTGGTCACGGGAACGGGCAGCATG
*****

WT          TCCACCTGTAAGACTCTGGATTTGGAGGTGGTGAGGAAGAAGCGGATTGAGGCTATTCGG
CZ407       TCCACCTGTAAGACTCTGGATTTGGAGGT-----GGAAGAAGCGGATTGAGGCTATTCGG
*****

WT          GGTCAGATCCTCAGTAAACTGCGCATGGCTAAAGAGCCTGAATCCGGAGCGG
CZ407       GGTCAGATCCTCAGTAAACTGCGCATGGCTAAAGAGCCTGAATCCGGAGCGG
*****
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Reference:

Xing, C., Gong, B., Xue, Y., Han, Y., Wang, Y., Meng, A., Jia, S. (2015) TGFβ1a regulates zebrafish posterior lateral line formation via Smad5 mediated pathway. *Journal of molecular cell biology*. 7(1):48-61