

***Gata1*^{m651/+} (AB) (CZRC catalog ID: CZ67)**

Nature of mutation

M651 allele was a mutant line, induced by the point mutagen ethyl nitrosourea (ENU) in the AB genetic background. This mutant line carries the (Arg) R339X mutation, which abolishes its DNA binding and transactivation activities. *Gata1*^{m651/m651} embryos were “bloodless” and died approximately 11 to 15 dpf (Weinstein, Schier et al. 1996; Lyons, Lawson et al. 2002; Belele, English et al. 2009).

Genotyping assay

Primers:

M651_forward: 5' ACTACAACACTATGGAGACGCA 3'

M651_reverse: 5' GTGGAAGTTGGCAGTAGATG 3'

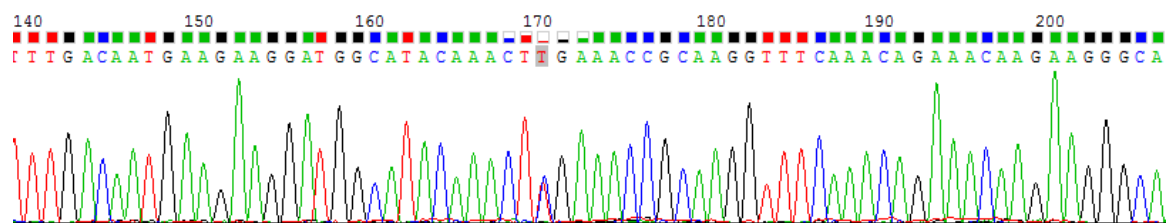
PCR program:

94°C	4min	} 30 Cycles
94°C	30 sec	
55°C	30 sec	
72°C	30 sec	
72°C	5min	
4°C	hold	

Product size: 374 bp:

The sequencing results of the parents:

CZ67 (+/-) GCATACAAACTCGAAACCGCAAGGTT (wild-type)



Reference

Belele, C. L., M. A. English, et al. (2009). "Differential requirement for Gata1 DNA binding and transactivation between primitive and definitive stages of hematopoiesis in zebrafish." *Blood* **114**(25): 5162-5172.

Lyons, S. E., N. D. Lawson, et al. (2002). "A nonsense mutation in zebrafish *gata1* causes the bloodless phenotype in vlad tepes." *Proc Natl Acad Sci U S A* **99**(8): 5454-5459.



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Weinstein, B. M., A. F. Schier, et al. (1996). "Hematopoietic mutations in the zebrafish." Development **123**: 303-309.