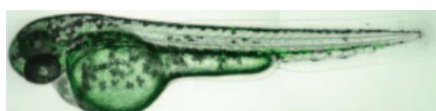


Tg(mpx:gfp) Transgenic zebrafish model of inflammation

Transgenic zebrafish model of inflammation



Cell Line: Tg(mpx:gfp) Host species: Zebrafish

An in vivo model for genetic analysis of the inflammatory response was developed by generating a transgenic zebrafish line that expresses GFP under the neutrophil-specific myeloperoxidase (mpx) promoter. Inflammation is induced after transection of the tail of zebrafish larvae and this inflammation subsequently resolves over a similar time course to mammalian systems. Ref: BLOOD, 15 DECEMBER 2006 VOLUME 108, NUMBER 13

The mpx:GFP construct drives fluorescent protein expression in neutrophils, which participate in a spontaneously resolving inflammatory response to injury. Zebrafish larvae were anesthetized by the addition of 4.2% tricaine to the medium in which they were maintained (E3). GFP was visualized by excitation at 492 nm. Photomicrographs of larvae at 56 and 96 hours show expression of GFP over the first days of zebrafish myelopoiesis.

References

1. Stephen A. Renshaw, Catherine A. Loynes, Daniel M.I. Trushell, Stone Elworthy, Philip W. Ingham, Moira K.B. Whyte(2016) , <https://ashpublications.org/blood/article/108/13/3976/6567/A-transgenic-zebrafish-model-of-neutrophilic>, <https://ashpublications.org/blood/article/108/13/3976/6567/A-transgenic-zebrafish-model-of-neutrophilic>, 108, 3976–3978

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