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Animals: Nestin-Cre::DIO-SPOTlight transgenic mouse line generation

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Matt Oliver[1]

[1]Duke University

Matt Oliver
Duke University

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We use this protocol and it's working

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Abstract

This protocol describes the steps performed to generate Nestin-Cre::DIO-SPOTlight transgenic mouse line.

Nestin-Cre::DIO-SPOTlight transgenic mouse line generation

1 To produce the Rosa26-DIO-SPOTlight mouse clone the DIO-SPOTlight contruct into the Ai9 vector backbone in place of the Lox-STOP-Lox-tdTomato cassette.

2 Transfer the linearized Ai9-DIO-SPOTlight plasmid to an available transgenic mouse core (rodent genetic engineering services).

3 Integrate the the linearized Ai9-DIO-SPOTlight plasmid into the Rosa26 locus using homologous recombination and electroporate into hybrid 129S6/C57BL/6N (G4) embryonic stem cells.

4 To achieve pan-neuronal expression cross Rosa26-DIO-SPOTlight hemizygous transgenic founders with Nestin-Cre mice.

Acknowledgements

- Ai9 vector backbone was a gift from Hongkui Zeng; Addgene plasmid # 22799; http://n2t.net/addgene:22799; RRID:Addgene_22799.
- Duke Transgenic Mouse Core performed generation of Rosa26-DIO-SPOTlight hemizygous transgenic founders
- Nestin-Cre mice were obtained from Jackson Laboratories; JAX: strain #003771, RRID: IMSR_JAX:003771 (Tronche, et al 1999)