

Guidelines for working with KOMP clones and mice.

Keywords: [KOMP](#) [JM8](#) [JM8A](#) [EUCOMM](#)

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The Knockout Mouse Project (KOMP) is a trans-NIH project that is aimed toward generating a publicly available resource of murine embryonic stem cells (ESCs) harboring a null mutation in every gene in the genome. The TMESCSR has successfully obtained germline transmission of several of these modified ESCs for laboratories here at Vanderbilt. We urge anyone who is interested in generating null alleles, reporter alleles and/or conditional alleles of their gene of interest to check the KOMP website ([www.komp.org](http://www.komp.org)) for availability of resources. There are live mice, modified ESCs and targeting vectors available for a nominal fee. We recommend purchasing the package of three ESC lines that are karyotyped (<http://www.komp.org/fees.php> the "Premium ES cell package"). It is also recommended to request that each clone be karyotyped after expansion.

All ESC lines are generated in the C57BL/6 genetic background so the breeding of chimeras is slightly different compared to chimeras obtained from 129 ESCs. Note that the JM8 cell line is slightly more stable than the JM8A cell line and that even very low percent chimeras can transmit through the germline so it is recommended that all chimeras are bred. KOMP has several guidelines for this on their website:

Germline Testing of KOMP C57BL/6N (non-agouti clones)

[https://www.komp.org/pdf/Germline\\_Testing\\_Protocol\\_for\\_KOMP\\_C57BL6N\\_non-agouti\\_clones.pdf](https://www.komp.org/pdf/Germline_Testing_Protocol_for_KOMP_C57BL6N_non-agouti_clones.pdf)

Germline Testing Protocol for KOMP C57BL/6N (agouti) derived ES cells (JM8A3, JM8A3.N1, JM8A1.N3)

[https://www.komp.org/pdf/Germline\\_Testing\\_Protocol\\_for\\_KOMP\\_JM8A\\_agouti\\_clones.pdf](https://www.komp.org/pdf/Germline_Testing_Protocol_for_KOMP_JM8A_agouti_clones.pdf)

More information can be found in the following publication:

Pettitt SJ, Liang Q, Rairdan XY, Moran JL, Prosser HM, Beier DR, Lloyd KC, Bradley A, and W.C. Skarnes. (2009). Agouti C57BL/6N embryonic stem cells for mouse genetic resources. *Nat Methods*. 6:493-5. <http://www.ncbi.nlm.nih.gov/pubmed/19525957>

## Attachments

 [Guide\\_to\\_microinjection\\_of\\_KOMP\\_ES\\_Cells.pdf](#) - Added on November 22, 2011 at 11:13 AM by Jennifer Skelton

Coat color of chimeric mice and their offspring from injections of JM8 and JM8A3 cells.

 [KOMP\\_information.pptx](#) - Added on February 17, 2012 at 9:52 AM by Patricia Labosky

This powerpoint file provides background information on KOMP and KOMP2. It also contains specific advice concerning what ESC packages to order and how the shared resource can generate mice from these cells with our services. Pricing details are on the last couple slides.