



B6 Albino Mouse Models

INTRODUCING TWO NEW B6 ALBINO MODELS ON THE
C57BL/6NTac BACKGROUND FOR USE AS BLASTOCYST
DONORS FOR B6 ES CELLS AND AS AN IMPROVED
BACKGROUND FOR IMAGING OF B6 STRAINS:
B6 ALBINO A⁺⁺ AND B6 ALBINO

B6 Albino A^{++}

C57BL/6NTac- $A^{tm1.1Arte}$ $Tyr^{tm1Arte}$

TACONIC MODEL NUMBER 11227

The B6 Albino A^{++} mouse can save you valuable time and resources when generating your next mouse model. Since the B6 Albino A^{++} mouse is an ideal blastocyst host for B6-derived ES cells, you can reduce the amount of time, labor, money, and animals used to generate your next mouse model.

Chimeras made using the B6 Albino A^{++} and B6 ES cells mated to B6 mice yield germline transmission pups you can identify by coat color alone. And G1 pups are identical to the B6 genome at all coat color loci, with no need for backcrossing.

Use with ES cells derived from the C57BL/6NTac strain such as JM8 to produce coat color chimeras.

The B6 Albino A^{++} mouse can also be used with agouti B6 ES cells such as JM8A3.

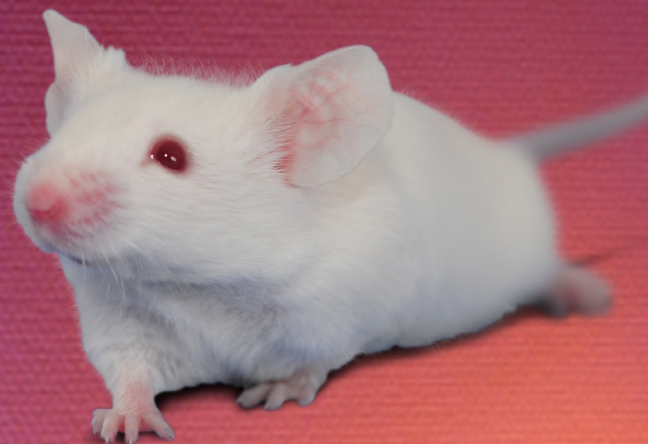
The B6 Albino A^{++} mouse was developed by Taconic Biosciences and is available exclusively from Taconic.

B6 B6 Albino A^{++} contains two mutations, a reversion of the non agouti locus (a) to Agouti (A), plus a point mutation in the tryosinase locus.

Inquire about available options such as superovulated females.

To learn more, visit taconic.com/11227

Chimeras generated using B6-derived ES cells and blastocysts from the B6 Albino A^{++} will be tri-colored. The agouti signaling peptide (produced in blastocyst-derived cells, which appear albino in the chimera) can produce a paracrine signaling effect in some cells derived from the ES cells. ES cell-derived hair patches can thus be either black or agouti. Both black and agouti patches should be counted for determination of chimerism percentages.



TO ORDER

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B6 Albino Mouse Models

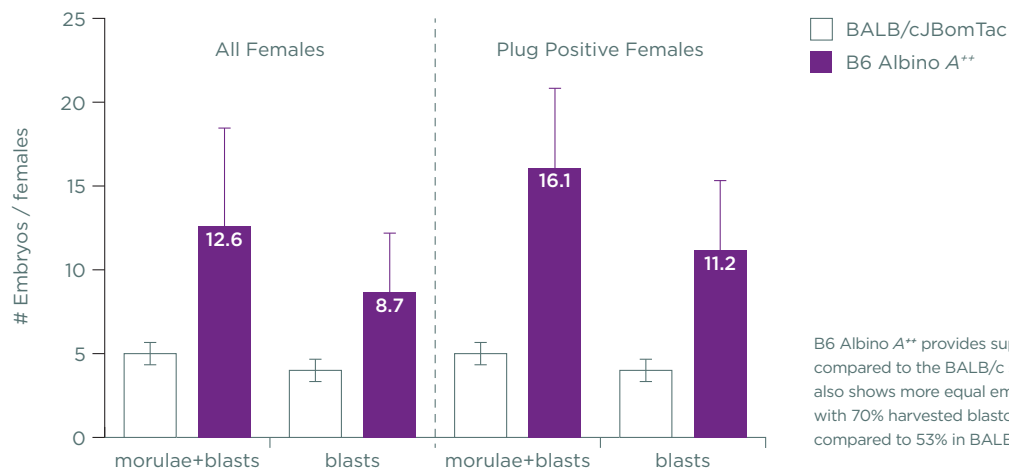
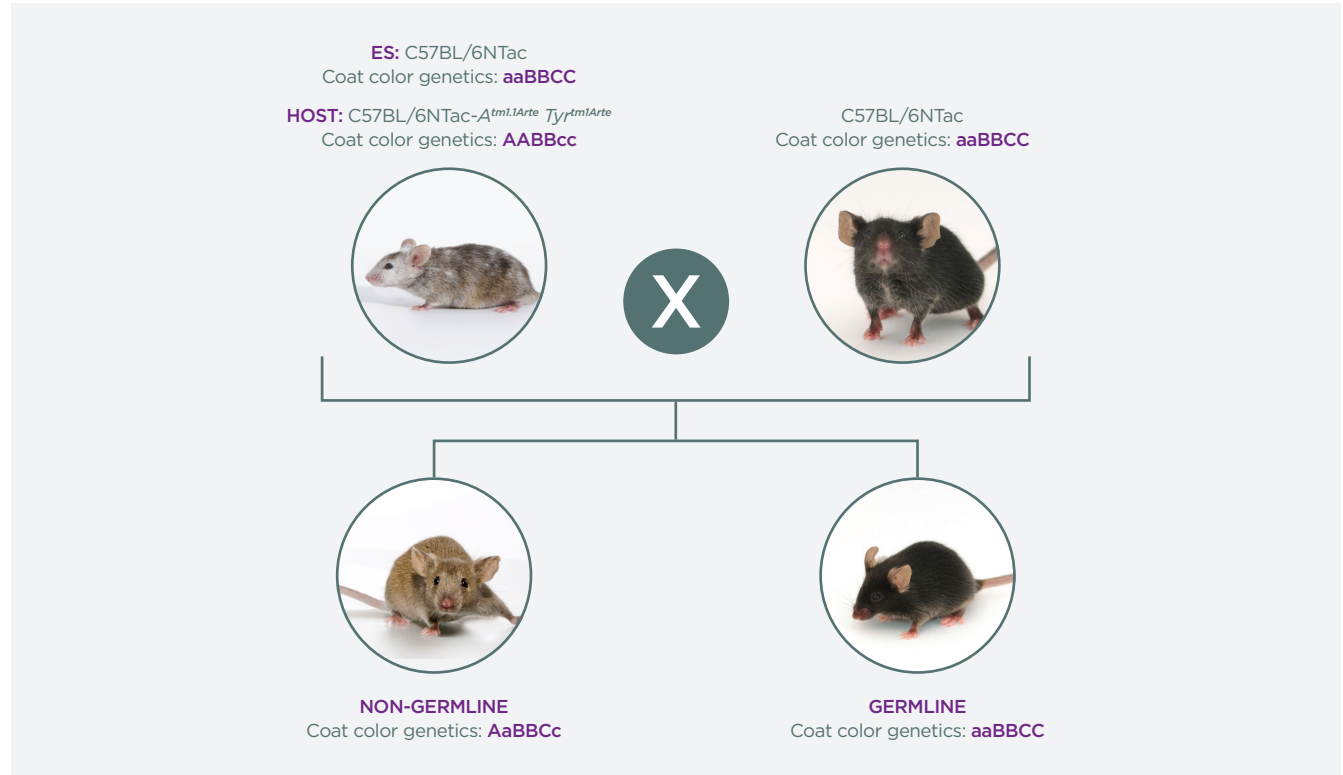
USE B6 ALBINO A⁺⁺ AS BLASTOCYST DONOR FOR BLACK JM8 ES CELLS

This permits detection of germline transmission by coat color alone in 100% of pups. In addition G1 germline progeny are identical to C57BL/6NTac at all coat color loci.

The B6 Albino A⁺⁺ mouse provides superior embryo yields compared to the BALB/c strain as well as more equal embryonic

development. Overall, the combined advantages of using the B6 Albino A⁺⁺ mouse mean you can use fewer animals, while saving time, labor, and money.

You can potentially skip a generation of breeding when mating B6 Albino A⁺⁺ chimeras to deleter strains on a B6 background.



DISCUSS YOUR NEEDS

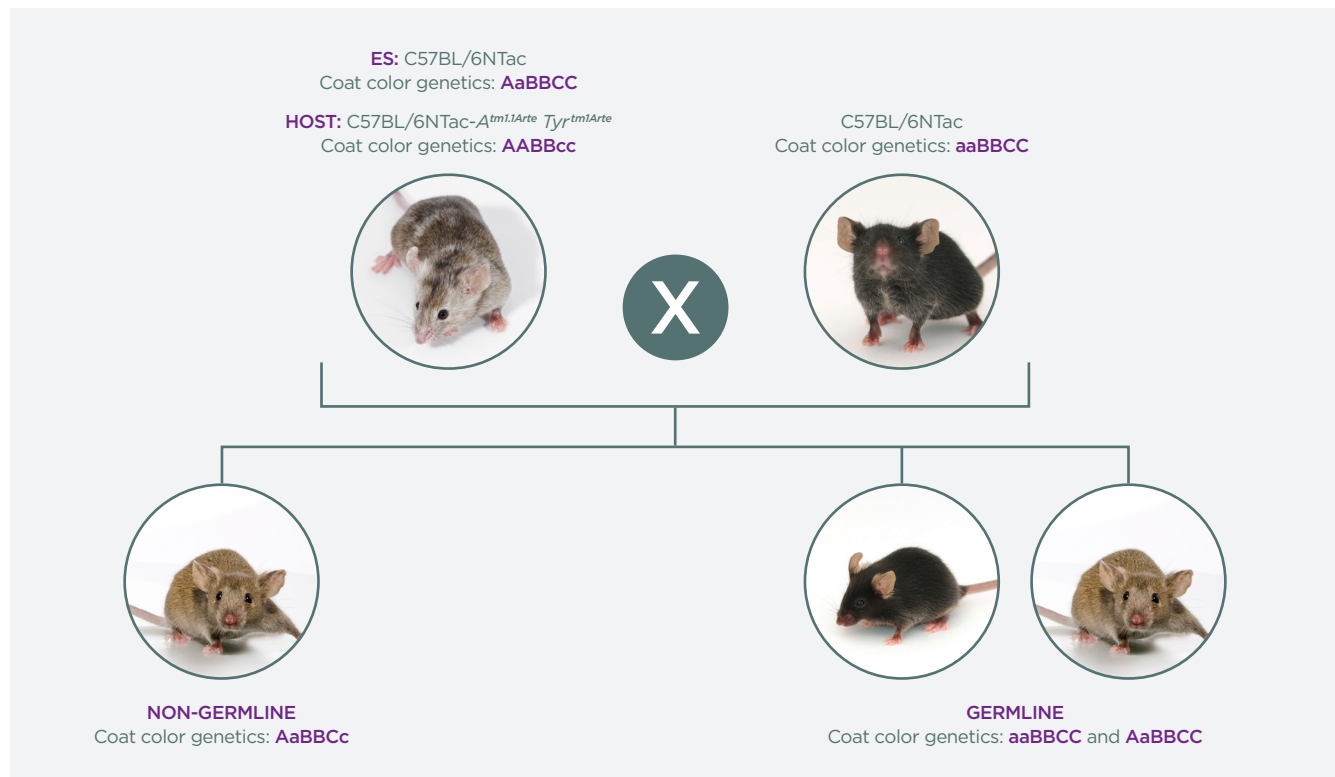
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USE B6 ALBINO A⁺⁺ AS BLASTOCYST DONOR FOR AGOUTI JM8A3 ES CELLS

This permits detection of germline transmission by coat color in 50% of pups.

Black G1 germline progeny are identical to C57BL/6NTac at all coat color loci. Agouti G1 germline progeny are heterozygous at one coat color locus.



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B6 Albino Mouse Models

B6 Albino

C57BL/6NTac-*Tyr*^{tm1Arte}
TACONIC MODEL NUMBER 11971

The B6 Albino mouse can save you valuable time and resources when generating your next mouse model. Mating chimeras to the B6 Albino provides a cost-effective approach for detecting germline transmission by coat color alone, and for maintaining the C57BL/6NTac substrain background.

Use with agouti ES cells derived from the C57BL/6NTac strain such as JM8A3 to produce coat color chimeras.

The B6 Albino mouse was developed by Taconic Biosciences, and is available exclusively from Taconic.

To learn more, visit taconic.com/11971



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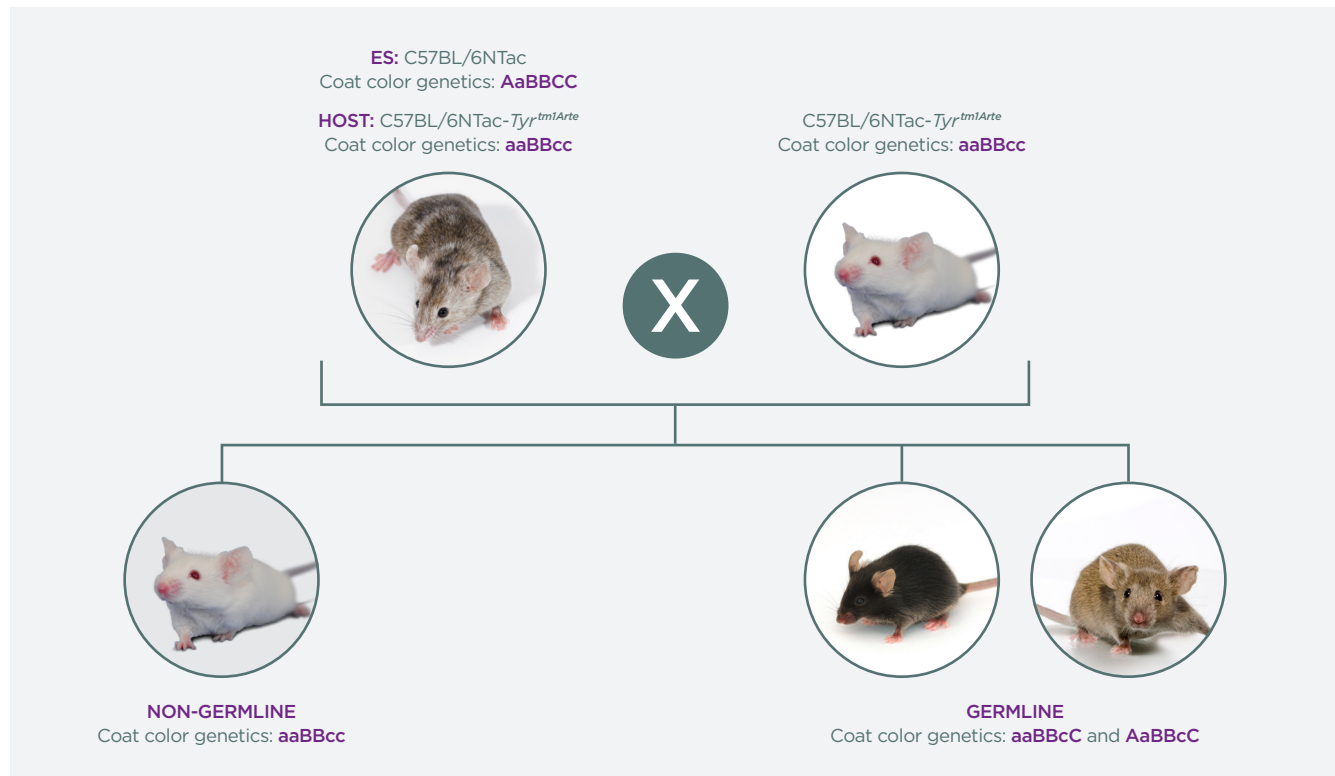
B6 Albino Mouse Models

USE B6 ALBINO AS BLASTOCYST DONOR FOR AGOUTI JM8A3 ES CELLS

This permits detection of germline transmission by coat color in 100% of pups. G1 germline progeny are heterozygous at one or two coat color loci.

The B6 Albino mouse is an ideal host for maintaining substrain specificity of ES cells derived from the C57BL/6NTac substrain.

It may be used as a blastocyst host for B6 ES cells with an agouti mutation. It is also suitable for use as a genetic background for models in which a B6 background is needed with an albino coat, for example in imaging applications.



















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B6 Albino Mouse Models

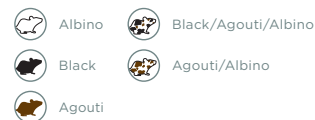
POSSIBLE MATING SCHEMES FOR CHIMERAS DERIVED FROM B6 ALBINO A^{++} OR B6 ALBINO BLASTOCYSTS WITH JM8 AND JM8A3 ES CELLS

ES CELL	BLASTOCYST DONOR	CHIMERA (G0)	MATING PARTNER	OFFSPRING (G1)		COMMENTS
				NON-GERMLINE	GERMLINE	
JM8 (Black)	C57BL/6NTac- <i>A^{tm1.1Arte} Tyr^{tm1Arte}</i>	 Black/Agouti/ Albino	 C57BL/6NTac	 Agouti	 Black	No genotyping required.* Black offspring are identical to C57BL/6NTac genome at all coat color loci.
JM8A3 (Agouti)	C57BL/6NTac- <i>Tyr^{tm1Arte}</i>	 Agouti/Albino	 C57BL/6NTac- <i>Tyr^{tm1Arte}</i>	 Albino	 Black or Agouti	No genotyping required.* Black are het (Cc). Agoutis are het (Aa, Cc).
JM8A3 (Agouti)	C57BL/6NTac- <i>A^{tm1.1Arte} Tyr^{tm1Arte}</i>	 Agouti/Albino	 C57BL/6NTac	 Agouti	 Black or Agouti	No genotyping required for black pups.* Black offspring are identical to C57BL/6NTac genome at all coat color loci. Germline agoutis are het (Aa).
JM8A3 (Agouti)	C57BL/6NTac- <i>A^{tm1.1Arte} Tyr^{tm1Arte}</i>	 Agouti/Albino	 C57BL/6NTac- <i>A^{tm1.1Arte} Tyr^{tm1Arte}</i>	 Albino	 Agouti	No genotyping required.* Agoutis are het (Cc) or double het (Aa, Cc).

*No genotyping is required to identify germline pups derived from ES cells; these can be identified by coat color. However, when using ES cells which are heterozygous for a mutation, genotyping is still required to determine which germline pups carry the mutation.

KEY:

COAT COLOR



RECOMMENDATIONS

FOR BLACK JM8 ES CELLS:

- Use Taconic B6 Albino A^{++} (C57BL/6NTac-*A^{tm1.1Arte} Tyr^{tm1Arte}*) as blastocyst donor and mate chimeras to C57BL/6NTac.

FOR AGOUTI JM8A3 ES CELLS:

- Use Taconic B6 Albino (C57BL/6NTac-*Tyr^{tm1Arte}*) as the blastocyst donor and mate chimeras to Taconic B6 Albino (C57BL/6NTac-*Tyr^{tm1Arte}*).
- Or use Taconic B6 Albino A^{++} (C57BL/6NTac-*A^{tm1.1Arte} Tyr^{tm1Arte}*) as blastocyst donor and mate chimeras to your choice of C57BL/6NTac or Taconic B6 Albino A^{++} (C57BL/6NTac-*A^{tm1.1Arte} Tyr^{tm1Arte}*).

FURTHER READING:

Zevnik B, Uyttersprot NC, Perez AV, Bothe GW, Kern H, Kauselmann G. (2014) C57BL/6N albino/agouti mutant mice as embryo donors for efficient germline transmission of C57BL/6 ES cells. PLoS One. 9(3):e90570.

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B6 Albino Mouse Models

Take Your Research Further



ADDITIONAL SERVICES

GEMS DESIGN

Taconic Biosciences GEMs Design empowers our clients to develop research models specifically suited to the unique needs of their discovery and development studies or therapeutic programs.

- Gene Inactivation
- Gene Mutation or Replacement
- CRISPR Gene Editing
- Transgene Expression
- miRNA expression
- Cohort Production Packages

HUMANIZATION

Taconic offers both genetic and cell and tissue based humanization of mouse models. Humanized mouse models are increasingly being utilized for a variety of research applications.

- Genetically Humanized Mice
- Cell and Tissue Humanized Mice

GEMS MANAGEMENT

Taconic's fully integrated GEMs Management brings innovative models from design to study-ready cohorts with unprecedented speed and transparency.

- Embryology
- Rapid Colony Expansion
- Contract Breeding
- Surgical Services
- Tissue Collection
- Genotyping and Molecular Analysis
- Microbiome and Germ-Free Research Models and Services

CHOOSE TACONIC

For more than 60 years, Taconic has anticipated the needs of the scientific community to deliver models and services that meet the diverse needs of biomedical and biopharmaceutical researchers.

Today that forward thinking and commitment to working collaboratively has resulted in a client-centric environment infused with a knowledge bank that allows you to draw on informed insight about next generation GEMs and humanized mouse models, enabling fast and reliable outcomes in your research.

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As a full-service biosciences company, Taconic can help you acquire, test, develop, breed, cryopreserve, prepare, and distribute highly relevant research lines worldwide. Whether you require custom genetically engineered, humanized or research-ready models, Taconic's scientists will partner with you to rapidly and efficiently deliver the highest quality models.

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