



RESEARCH MODELS

Rats

Mice

Other rodents



C57BL/6NRj Mouse

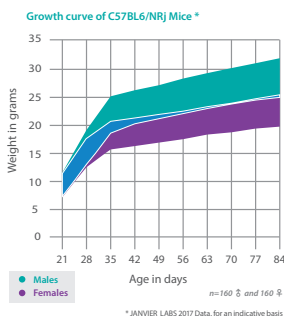
- **Strain name:** C57BL/6NRj
- **Type:** Inbred mouse
- **Origin:** National Institutes of Health (USA) - 1999
- **Colour and related genotype:** Black mouse, *a (a/a)* non agouti - MHC: Haplotype *H2^b*
- **Breeding:** Good breeder but quite difficult to rear (sensitive to the environment). Cannibalism with its pups.

Description of our model

This strain was created by C.C. LITTLE, in 1921, from Miss Abbie LATHROP's stock. The Jackson Laboratory's colony was divided in two sub-strains before 1937, resulting in the C57BL/6 and the C57BL/10 strains. The C57BL/6 strain was brought to The Jackson Laboratory in 1948 (C57BL/6J). This strain was transmitted at the 32th generation (F32) from the Jackson Laboratory to the National Institut of Health (N.I.H) in 1951 (C57BL/6N).

The **C57BL/6N** mouse shares many characteristics with the C57BL/6J, e.g. alopecia and cannibalism. 5 SNP differences have however been identified (Petkov and Wiles, 2005). This strain does not have the deletion in the *Nnt* gene that has been found in the C57BL/6J. It can thus be used as a control in metabolic studies that focus on the mechanisms of glucose tolerance, e.g. Diet-Induced-Obesity studies. The **C57BL/6N** mouse is homozygous for the *Crb1^{rd8}* gene (retinal degeneration 8 mutation). It's characterized by multiple spots, caused by retinal folds and pseudorosettes with large white retinal deposits covering the inferior quadrant of the retina, found in the fundus of the eye (Aleman, 2011; Chang *et al.* 2002).

Due to its good breeding performance, this strain is used in the production of embryos for transgenesis (QUICKBLASTO®). The QUICKBLASTO®, a JANVIER LABS's product, is a kit containing straws of frozen embryos at the morula stage (C57BL/6NRj or BALB/cAnNRj). With these embryos, after thawing and culture, you will have blastocysts ready to receive your embryonic stem cells.



Hematological parameters* of 10-week old C57BL/6NRj mice			Reproductive data*	
Parameters	Male	Female		
Erythrocytes (10 ¹² /l)	9.5 ± 1.6	9.7 ± 0.5	Bigamous mating	
Hematocrit (l/l)	0.51 ± 0.09	0.52 ± 0.03	Litter size at birth	6.87
Hemoglobin (g/dl)	12.9 ± 4.8	14.8 ± 0.4	Weaning %	81
Mean corpuscular volume (fl)	53 ± 1	54 ± 1	Productivity index	0.68
Mean corpuscular rate (pg)	13.3 ± 4.4	15.5 ± 0.5	Sterility %	5
Hemoglobin concentration (g/dl)	25 ± 8	28 ± 1	Gestation time	Between 18 and 20 days
Blood platelets (10 ⁹ /l)	1282 ± 75	979 ± 99		
Leukocytes (10 ⁹ /l)	2.4 ± 0.5	5.0 ± 1.1		
Neutrophils (10 ⁹ /l)	0.23 ± 0.06	0.26 ± 0.06		
Lymphocytes (10 ⁹ /l)	2.04 ± 0.39	4.28 ± 0.86		
Eosinophils (10 ⁹ /l)	0.05 ± 0.07	0.08 ± 0.07		
Monocytes (10 ⁹ /l)	0.02 ± 0.01	0.03 ± 0.03		
Basophils (10 ⁹ /l)	0.01 ± 0.01	0.07 ± 0.05		

Biochemical blood parameters* of 10-week old C57BL/6NRj mice		
Parameters	Male	Female
Glucose (g/l)	2.5 ± 0.5	2.9 ± 0.5
Urea (g/l)	0.5 ± 0.0	0.4 ± 0.1
AST (ASAT) (U/l)	155 ± 55	187 ± 60
ALT (ALAT) (U/l)	64 ± 24	56 ± 16
Alkaline phosphatase (U/l)	120 ± 10	150 ± 18
Cholesterolaemia (g/l)	0.9 ± 0.1	0.8 ± 0.1
Triglycerides (g/l)	1.2 ± 0.1	1.0 ± 0.2
Creatinine (mg/l)	5.2 ± 0.4	5.3 ± 0.5

* JANVIER LABS 2013 Data, for an indicative basis

Our added value

- The « JANVIER LABS Genetic Policy », a specific programme, guarantees homozygosity of autosomal pairs.
- Animals with the SPF or SOPF standards.
- A gentling policy for docile and easy-to-handle animals.
- Optimal stability conditions of our models during shipments, thanks to our dedicated and internal transport service.
- A scientific support with a team of Veterinarians and PhD.

The available scientific bibliography:

Research has been conducted, all over the world, from models bred in our laboratories. Discover our updated bibliography of available studies on our Internet website, heading: **Customer Support**.



www.janvier-labs.com

Main application and research fields

- Cardiovascular research: atherosclerosis
- Hematology
- Immunology and inflammation
- Infections
- Metabolism: obesity, diabetes, hyperglycemia, insulin resistance
- Neurobiology and neuro-sensorial research
- Oncology
- Ophthalmology and retina degeneration
- Toxicology

Our additional services



Laboratory Services



Transgenic Services