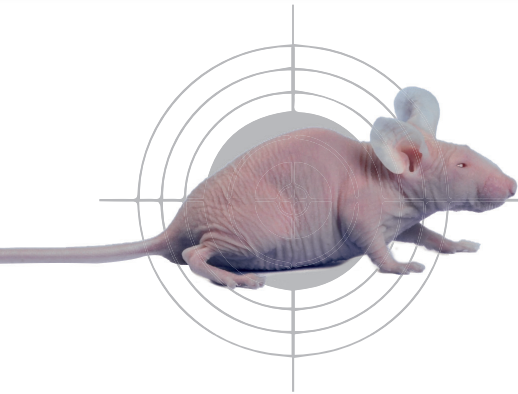


360° MODEL RANGE



BALB/c-nu mouse Immunodeficient

- **Strain name:** BALB/cAnN-*Foxn1*^{nu/nu}/Rj
- **Type:** Mutant inbred mouse
- **Origin:** Nijmegen - 2009
- **Colour and related genotype:** Albino mouse, A/A, *Typr*^{1b}/*Typr*^{1b}, *Tyr*^c/*Tyr*^c – MHC: haplotype H2^d

PRESENTATION OF THE MODEL

The nude mutation appeared in an outbred albino mouse stock at the Ruchill Hospital, Glasgow in 1962. This mutation was transferred to the genetic background of the inbred BALB/cAnN mouse by backcrossing.

This genetic background was selected by Mc Dowell in 1923 from a stock of outbred albino mice obtained by Bagg in 1913. They were transferred by Mc Dowell to Dr. Snell in 1932 at F32 generation.

This mutation, identified by Dr. Grist, is an autosomal recessive mutation of the *Foxn1* (forkhead box N1) located on chromosome 11. It causes thymic aplasia (total or partial) which results in immunodeficiency.

This deficiency leads to an absence of T cells; B cells remaining functional.

This mutation also results in a keratinisation defect of the hair follicle and the epidermis. This results in mice with transient downy hair that, when it is gone, leads to an almost total absence of hair. There is no link between the presence of down and immunodeficiency severity.

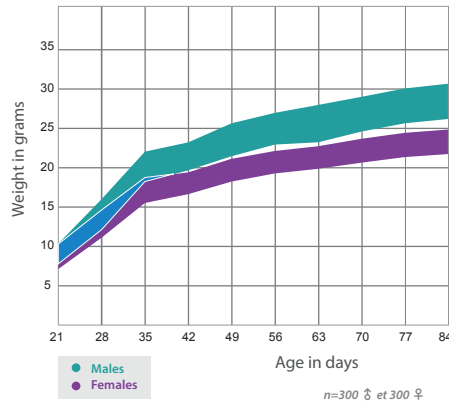
Main application and research fields

- ✕ Monoclonal antibodies: study and production
- ✕ Immunology
- ✕ Experimental infections
- ✕ Oncology
- ✕ Transplantation: xenograft and allograft

360° MODEL RANGE

GROWTH CURVE AND REPRODUCTIVE DATA

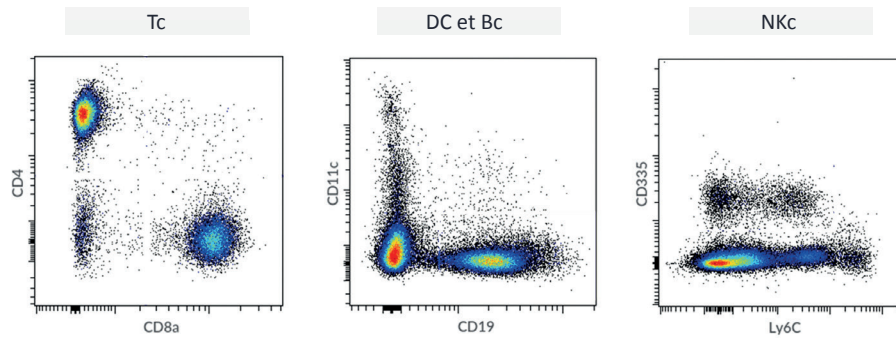
■ Growth curve



■ Haematological parameters

				Mean	Standard deviation
Concentration	Hemoglobin	Blood (g/dL)	F	17	0
			M	17	0
Concentration	Mean corpuscular hemoglobin concentration	Blood (g/dL)	F	32	0
			M	32	0
Concentration	Platelet absolute count	Blood (K/uL)	F	997	201
			M	1,171	45
Concentration	Red blood cell absolute count	Blood (M/uL)	F	11	0
			M	11	0
Concentration	White blood cell count	Blood (K/uL)	F	7	2
			M	8	3
Frequencies	Hematocrite	Blood (%)	F	51	1
			M	52	1
Frequencies	High fluorescence ratio reticulocyte	Blood (%)	F	33	2
			M	31	2
Frequencies	Immature reticulocyte fraction	Blood (%)	F	53	2
			M	48	3
Frequencies	Low fluorescence ratio reticulocyte	Blood (%)	F	47	2
			M	52	3
Frequencies	Medium fluorescence ratio reticulocyte	Blood (%)	F	20	0
			M	17	1
Frequencies	Platelet larger cell ratio	Blood (%)	F	5	2
			M	4	0
Frequencies	Plateletcrit	Blood (%)	F	1	0
			M	1	0
Frequencies	Reticulocyte absolute count	Blood (%)	F	4	0
			M	3	0
Quantity	Hémoglobine corpusculaire moyenne	Blood (pg)	F	15	0
			M	15	0
Quantity	Mean corpuscular volume	Blood (fL)	F	47	1
			M	47	1

FLOW CYTOMETRY ANALYSIS, SPLEEN



All lymphoid organs of our models were analysed.

PHENOTYPIC CHARACTERISATION

This model has been entirely characterized. The immunological and hematological parameters were characterized by Center of Immunophenomics (Ciphe, Marseille, France).

Background	Breeding	Coat	T Lymphocytes	B Lymphocytes	Leakiness	NK cells	Dendritic cells
BALB/c	Inbred	Nude	Absent	Normal	-	Normal	Normal
Macrophages	Complement	Irradiation tolerance	Life span	Humoral immunity	Lymphoma outcome	Genes of interest	
Normal	Normal	High	54 Wk.	Normal	Indefinite	Foxn1	

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