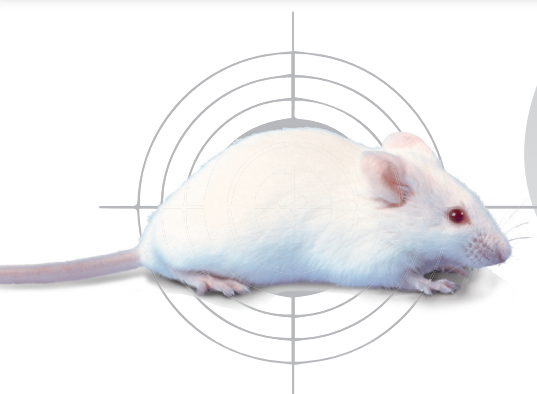


360° MODEL RANGE



CB17-SCID Immunodeficient

- **Strain name:** CB-17/Icr-Prkdc^{scid/scid}/Rj
- **Type:** Mutant congenic mouse
- **Origin:** Institut Pasteur (Lille, France) - 2009
- **Colour and related genotype:** Albino mouse, *Typr^{1b}/Typr^{1b}, Tyr^c/Tyr^c* - MHC : Haplotype H2^d

PRESENTATION OF THE MODEL

The scid (Severe Combined Immunodeficiency) mutation was discovered by Dr. M. J. Bosma and his team in the 1980s at the Fox Chase Cancer Center (Philadelphia, USA).

The mutation appeared in a colony of inbred BALB/c-Ighb (CB-17/Icr, BALB/c congenic background with Ighb-Cb allele from the C57BL/Ka strain). This recessive autosomal mutation is characterized by an absence of functional T cells and B cells, a lymphopenia, a hypogammaglobulinemia and a normal hematopoietic environment. The activity of the antigen-presenting cells (APC), myeloid cells and the functions of Natural Killer cells (NK) depend on the genetic background the mutation is transferred to.

Most homozygotes do not have any detectable IgM, IgG1, IgG2a, IgG2b, IgG3, or IgA.

Some SCID mice can spontaneously develop a partial immune reactivity: the "leaky" mouse.

This strain has a shorter lifetime in a conventional environment. However, under SOPF conditions, the CB17-SCID mouse survives for up to a year.

■ Biochemical blood parameters

Parameters	Male	Female
Glucose (g/l)	2,6 ± 0,3	2,1 ± 0,2
Urea (g/l)	0,4 ± 0,0	0,4 ± 0,0
AST (UI/l)	100 ± 35	150 ± 50
ALT (UI/l)	37 ± 8	69 ± 23
Alkaline phosphatase (UI/l)	126 ± 12	124 ± 22
Total Cholesterol (g/l)	0,9 ± 0,1	0,7 ± 0,0
Triglyceride (g/l)	2,3 ± 0,5	1,8 ± 0,2
Creatinine (mg/l)	4,0 ± 0,0	4,0 ± 0,0

Biochemical blood parameters of 10-week-old CB17/Icr-Prkdc^{scid/scid}/Rj mice

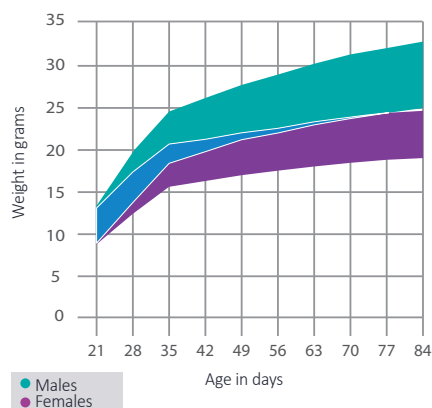
Main application and research fields

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

360° MODEL RANGE

GROWTH CURVE AND REPRODUCTIVE DATA

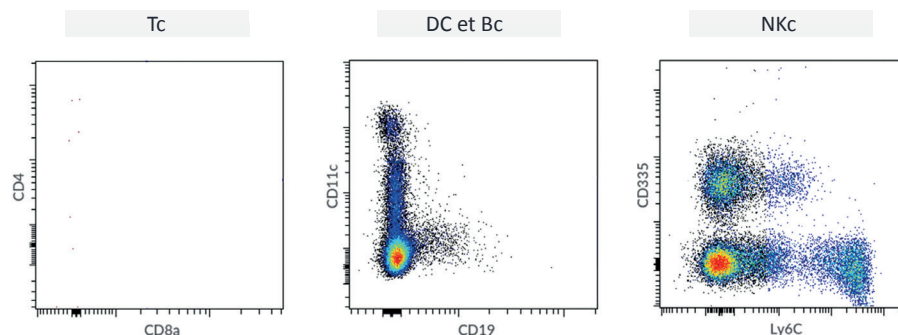
■ Growth curve



■ Haematological parameters

				Mean	Standard deviation
Concentration	Hemoglobin	Blood (g/dL)	F	16	0
			M	16	0
	Mean corpuscular hemoglobin concentration	Blood (g/dL)	F	32	0
			M	32	0
	Platelet absolute count	Blood (K/uL)	F	925	101
			M	1,015	62
	Red blood cell absolute count	Blood (M/uL)	F	11	0
			M	11	0
	White blood cell count	Blood (K/uL)	F	2	0
			M	3	0
Frequencies	Hematocrite	Blood (%)	F	50	1
			M	50	1
	High fluorescence ratio reticulocyte	Blood (%)	F	26	4
			M	26	4
	Immature reticulocyte fraction	Blood (%)	F	45	4
			M	47	3
	Low fluorescence ratio reticulocyte	Blood (%)	F	55	4
			M	53	3
	Medium fluorescence ratio reticulocyte	Blood (%)	F	19	1
			M	21	1
Quantity	Platelet larger cell ratio	Blood (%)	F	3	1
			M	5	1
	Plateletcrite	Blood (%)	F	1	0
			M	1	0
	Reticulocyte absolute count	Blood (%)	F	3	0
			M	3	0
	Hémoglobine corpusculaire moyenne	Blood (pg)	F	15	0
			M	14	0
	Mean corpuscular volume	Blood (fl)	F	46	1
			M	45	0

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
CB17	Inbred	Albino	Absent	Absent	High	Low	Low
Macrophages	Complement	Irradiation tolerance	Life span	Humoral immunity	Lymphoma outcome	Genes of interest	
Dysfunctional	Normal	Low	36 Wk.	Absent	Low	Scid (Prkdc)	

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