

# CD-1<sup>®</sup> IGS Mice

NOMENCLATURE: Crl:CD1(ICR)



## Strain Origin

The original group of Swiss mice that served as progenitors of this stock consisted of two male and seven female albino mice derived from a non-inbred stock in the laboratory of Dr. de Coulon, Centre Anticancereux Romand, Lausanne, Switzerland. These animals were imported into the United States by Dr. Clara Lynch of the Rockefeller Institute in 1926. The Hauschka Ha/ICR stock was initiated in 1948 at the Institute for Cancer Research (ICR) in Philadelphia from "Swiss" mice of Rockefeller origin. They then went to Dr. Edward Mirand of Roswell Park Memorial Institute where they were designated as HaM/ICR and then to Charles River in 1959. IGS refers to animals bred using the Charles River International Genetic Standardization system.

Coat Color: White (Albino)

Produced: North America, Europe and Japan

# CD-1<sup>®</sup> IGS Mice

## NOMENCLATURE: Crl:CD1(ICR)

### Genetic Management of CD-1<sup>®</sup> IGS Mouse Colony

Charles River uses our IGS program to manage production of the Crl:CD1(ICR) mouse. The IGS program is a management system used to minimize inbreeding and manage random genetic drift that would otherwise lead to colony divergence among colonies bred in different locations worldwide. The IGS program is validated by direct genetic analysis of animals from the foundation colony and the barrier rooms. For the CD-1<sup>®</sup> mouse, analyses have been carried out on animals from the Wilmington, MA, foundation colony (2004 and 2010). For the 110 microsatellite loci tested, average heterozygosity was not significantly different between the testing periods (28.1% versus 28.9%, respectively). These data indicate that the IGS program is working to maintain genetic variation in the CD-1<sup>®</sup> foundation colony and there has been no significant change in the overall level of variation during the six-year interval for testing. Future testing for this and other IGS program colonies will be performed every three years for the foundation colony and every five years for each production colony. For further information regarding Charles River's IGS program, please refer to the IGS technical sheet found online at [www.criver.com/info/rm](http://www.criver.com/info/rm).

### Charles River CD1<sup>®</sup> IGS Data

We understand that knowing certain baseline parameters for your research model colonies is vital to achieving valid and reproducible research results. To help ensure that we are providing the exact research models that you need, we conduct routine health surveillance on our animal colonies for an extensive list of infectious agents, in addition to maintaining clinical and toxicological data for those models.

### Clinical Chemistry

Crl:CD1(ICR)*		ALB (g/dl)	ALK (U/l)	ALT (U/l)	AST (U/l)	TBIL (mg/dl)	BUN (mg/dl)
Male	Mean	2.99	154.63	45.08	80.55	0.32	14.68
	S.D.	0.62	50.03	16.11	67.29	0.12	3.99
	n	63	64	65	65	63	62
Female	Mean	2.95	156.54	41.63	82.80	0.26	12.80
	S.D.	0.96	51.10	13.91	39.85	0.09	3.81
	n	54	52	54	55	52	50

Crl:CD1(ICR)*		Ca (mg/dl)	Cl (meq/l)	CHOL (mg/dl)	CRE (mg/dl)	GGT (U/l)	GLU (mg/dl)
Male	Mean	11.30	116.18	164.89	11.30	116.18	164.89
	S.D.	0.60	11.06	27.95	0.60	11.06	27.95
	n	61	45	64	61	45	64
Female	Mean	10.73	117.80	133.15	10.73	117.80	133.15
	S.D.	2.19	11.71	25.34	2.19	11.71	25.34
	n	55	31	54	55	31	54

Crl:CD1(ICR)*		P (mg/dl)	K <sup>+</sup> (meq/l)	Na (meq/l)	TP (g/dl)	TRIG (mg/dl)
Male	Mean	11.23	15.28	150.85	5.38	192.40
	S.D.	2.88	24.63	31.76	0.95	66.72
	n	62	45	45	62	65
Female	Mean	10.20	17.12	144.46	5.23	248.05
	S.D.	2.81	29.80	36.96	1.13	100.74
	n	52	31	31	52	57

\*North American colonies only/non-fasted values

\*Potassium levels reflect acidosis caused by CO<sub>2</sub> euthanasia

Age: 56 - 70 days

Diet: Purina 5L79 rodent chow

Temperature: 68 - 72°F

Humidity: 40 - 60%

Cage Density: 5 in<sup>2</sup>/mouse

Screening Period: August 2006 to November 2007

Euthanasia: CO<sub>2</sub>

Bleed Route: Cardiac puncture after euthanasia

Analyzing Equipment: Alfa Wassermann Ace Alera

## Hematology

CrI:CD1 (ICR)		WBC	RBC	HGB	HCT	MCV
		(K/ $\mu$ l)	(M/ $\mu$ l)	(g/dl)	(%)	(fL)
Male	Mean	8.79	8.93	14.67	49.97	56.10
	S.D.	2.54	1.37	2.21	7.67	4.59
	n	57	57	57	57	57
Female	Mean	8.77	8.78	14.55	49.43	56.39
	S.D.	2.95	1.12	2.05	6.70	3.75
	n	58	58	58	58	58

CrI:CD1 (ICR)		MCH	MCHC	RDW	PLT	MPV
		(pg)	(g/dl)	(%)	(K/ $\mu$ l)	(fL)
Male	Mean	16.45	29.50	16.79	1528.88	5.09
	S.D.	0.97	2.76	0.96	400.63	0.42
	n	57	57	57	57	57
Female	Mean	16.59	29.52	16.62	1383.53	5.06
	S.D.	1.09	2.65	1.09	528.53	0.44
	n	58	58	58	58	58

CrI:CD1 (ICR)		NEUT	LYMPH	MONO	EOS	BASO
		(K/ $\mu$ l)	(K/ $\mu$ l)	(K/ $\mu$ l)	(K/ $\mu$ l)	(K/ $\mu$ l)
Male	Mean	1.50	6.59	0.49	0.17	0.04
	S.D.	0.84	1.90	0.19	0.15	0.05
	n	57	57	57	57	57
Female	Mean	1.34	6.70	0.50	0.17	0.04
	S.D.	0.73	2.17	0.21	0.17	0.04
	n	58	58	58	58	58

\*North American colonies only/non-fasted values

Age: 56 - 70 days

Diet: Purina 5L79 rodent chow

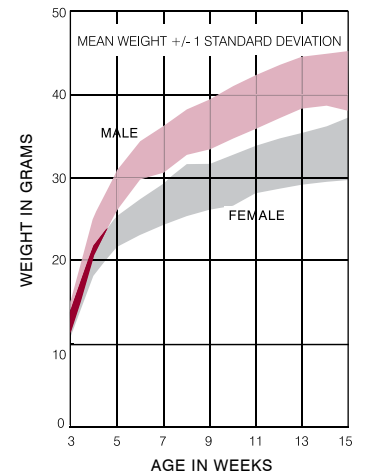
Temperature: 68 - 72°F

Humidity: 40 - 60%

Cage Density: 5 in<sup>2</sup>/mouse

Bleed Route: Cardiac puncture

Analyzing Equipment: Drew Scientific HemaVet



## Charles River Technical Data

2010: Spontaneous Neoplastic Lesions in the CrI:CD-1® (ICR) Mouse in Control Groups from 18-Month to Two-Year Studies

2007: Reproductive and Behavioral Evaluations in CrI:CD-1® (ICR) Mice

2000: Spontaneous Neoplastic Lesions in the CrI:CD-1® (ICR) BR Mouse

1995: Spontaneous Neoplastic Lesions in the CrI:CD-1® (ICR) BR Mouse

## Research Applications and References

The CD-1® mouse is a multipurpose model that can be used in such fields as toxicology (safety and efficacy testing), aging and oncology.

### General Purpose

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### Toxicology

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### Carcinogenesis

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