

# Dutch Belted rabbits

HSDHAZ:(DB) SPF

SCIENTIFIC NAME	Oryctolagus cuniculus
ORDER	Lagomorpha
CLASS	Mammalia
STRAIN	Dutch Belted
STRAIN DESIGNATION	HsdHaz:(DB) SPF



## CHARACTERISTICS

Dutch Belted rabbits, also known as the Dutch Rabbit is a small to medium sized breed with distinctive color pattern. They have a solid-colored body with a symmetrical wide white stripe encircling their midsection. They have a white belt or "blaze" that extends from the nose and should ideally encircle the body. They are known for their friendly and gentle disposition.

- **Body temperature**  
100°–103° F
- **Respiration rate**  
35–65 BPM
- **Weight: newborn**  
50–60 gm
- **Gestation period**  
31 days
- **Average litter size**  
6–8
- **Age at weaning**  
5 weeks
- **Photo period (light/dark)**  
14/10
- **Water consumption (automated watering system)**  
150 mL per day
- **Food consumption**  
55 gm 5–9 weeks  
85–90 gm over 9 weeks
- **Sexual maturity Male:**  
6–9 months
- **Sexual maturity Female:**  
5–8 months
- **Breeding life Male:**  
24–30 months
- **Breeding life Female:**  
24–30 months
- **Identification methods**  
Ear tags, tattoos, microchips

## RABBIT ENRICHMENT

Our commitment to animal welfare including enrichment is a daily commitment. Our rabbit enrichment program includes:

- Music in each room for 24 hours daily
- Each animal is handled twice per week, beginning at 4 days of age
- Group housing up to 4-1/2 -5 months of age
- Dumbbells, chains, bells and other 'toys' are supplied for continuous enrichment
- Resting pads are provided in each cage as needed
- Flat, perforated cage bottoms

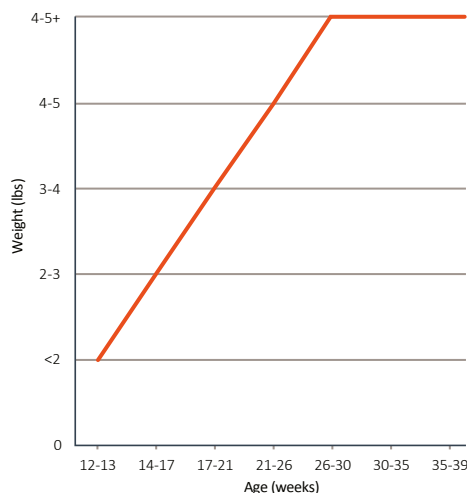
## RESEARCH USE AND RELATED PUBLICATIONS

This outbred stock is used in general studies, dermatology, immunology, neuroscience, ophthalmology, pharmacology, teratology and toxicology.

## ADDITIONAL SERVICE OFFERINGS

- Ocular screening solutions – Pre-shipment eye screening solutions identify optimal models for your ocular studies
- Social housing solutions – Social housing capabilities promote the compatibility and sociability of your rabbits (up to 2 kg)
- We're able to offer single or double vascular catheterizations in our rabbit models to enable efficient and fast study start
- Health monitoring program – At least once per month, a minimum of four representative rabbits from each production building are sent to a third-party laboratory for a complete health assessment

Figure 1: Age and weight chart



Weights may fluctuate slightly from the growth chart depending on the time of year.

## GENERAL STUDIES REFERENCES

1. *A Probability Analysis of Historical Pregnancy and Fetal Data from Dutch Belted and New Zealand White Rabbit Strains from Embryo-Fetal Development Studies*. Posobiec LM, Cox EM, Solomon HM, Lewis EM, Wang KF, Stanislaus D. 27038066. Birth Defects Res B Dev Reprod Toxicol. 2016 Apr;107(2):76-84
2. *Comparison of a modified mid-coronal sectioning technique and Wilson's technique when conducting eye and brain examinations in rabbit teratology studies*. Ziejewski MK, Solomon HM, Rendemont J, Stanislaus D.H3. 25704050H3. Birth Defects Res B Dev Reprod Toxicol. 2015 Feb;104(1):23-34

[Click to view more General Studies References](#)

## IMMUNOGOLGY REFERENCES

1. *Escherichia coli O157:H7 infection in Dutch belted and New Zealand White Rabbits*. Panda, Aruna; Tatarov, Ivan; Melton-Celsa, Angela R; Kolappaswamy, Krishnan; Kriel, Edwin H; Petkov, Daniel; Coksaygan, Turhan; Livio, Sofie; McLeod, Charles G; Nataro, James P; OBrien, Alison D; DeTolla, Louis J. 20158946. Comparative medicine Vol.60, 2010.
2. *Growth factors outside the PDGF family drive experimental PVR*. Lei, Hetian; Velez, Gisela; Hovland, Peter; Hirose, Tatsuo; Gilbertson, Debra; Kazlauskas, Andrius. 19324843. Investigative ophthalmology & visual science Vol.50, 2009

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## NEUROSCIENCE REFERENCES

1. *Paired measurements of cochlear function and hair cell count in Dutch-belted rabbits with noise-induced hearing loss*. Haragopal H, Dorkoski R, Johnson HM, Berryman MA, Tanda S, Day ML. 31760262. Hear Res. 2020 Jan;385:107845. doi: 10.1016/j.heares.2019.107845. Epub 2019 Nov 15.
2. *Specific loss of neural sensitivity to interaural time difference of unmodulated noise stimuli following noise-induced hearing loss*. Haragopal H, Dorkoski R, Pollard AR, Whaley GA, Wohl TR, Stroud NC, Day ML. 32845200. J Neurophysiol. 2020 Oct 1;124(4):1165-1182. doi: 10.1152/jn.00349.2020. Epub 2020 Aug 26.

[Click to view more Neuroscience References](#)

## PHARMACOLOGY REFERENCES

1. *A Mechanistic and Translational Pharmacokinetic-Pharmacodynamic Model of Abicipar Pegol and Vascular Endothelial Growth Factor Inhibition*. Luu KT, Seal JR, Attar M. 32098861. J Pharmacol Exp Ther. 2020 May;373(2):184-192. doi: 10.1124/jpet.119.263178. Epub 2020 Feb 25.
2. *A novel function of p53: a gatekeeper of retinal detachment*. Lei, Hetian; Rheaume, Marc-Andre; Cui, Jing; Mukai, Shizuo; Maberley, David; Samad, Arif; Matsubara, Joanne; Kazlauskas, Andrius. 22901751. The American journal of pathology Vol.181, 2012.

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## TERATOLOGY REFERENCES

1. *Assessment of developmental toxicity of vorinostat, a histone deacetylase inhibitor, in Sprague-Dawley rats and Dutch Belted Rabbit*. Wise, L David; Turner, Katie J; Kerr, Janet S. 17294457. Birth defects research. Part B, Developmental and reproductive toxicology Vol.80, 2007.
2. *Different embryo-fetal toxicity effects for three VLA-4 antagonists*. Crofts, F; Pino, M; DeLise, B; Guittin, P; Barbellion, S; Brunel, P; Potdevin, S; Bergmann, B; Hofmann, T; Lerman, S; Clark, R L. 15098199. Birth defects research. Part B, Developmental and reproductive toxicology Vol.71, 2004.

[Click to view more Teratology References](#)

## TOXICOLOGY REFERENCES

1. *Determination of a No-Observable Effect Level for Endotoxin Following a Single Intravitreal Administration to Dutch Belted Rabbit*. Bantseev, Vladimir; Miller, Paul E; Bentley, Ellison; Schuetz, Chris; Streit, Tim M; Christian, Brian J; Farman, Cindy; Booler, Helen; Thackaberry, Evan A. 28282486. Investigative ophthalmology & visual science Vol.58, 2017.
2. *The Dutch-Belted rabbit: an alternative breed for developmental toxicity testing*. Birth defects research. Spence, Stan. 14745994. Part B, Developmental and reproductive toxicology Vol.68, 2003.

[Click to view more Toxicology References](#)