

Resource Summary Report

Generated by [dkNET](#) on Sep 8, 2026

F344-Cybb^{em1Shmo}Nox1^{em1Shmo}Nox4^{em1Shmo}

RRID:RGD_598092603

Type: Organism

Proper Citation

RRID:RGD_598092603

Organism Information

URL: <https://rgd.mcw.edu/rgdweb/report/strain/main.html?id=598092603>

Proper Citation: RRID:RGD_598092603

Description: Rattus norvegicus with name F344-Cybb^{em1Shmo}Nox1^{em1Shmo}Nox4^{em1Shmo} from RGD.

Species: Rattus norvegicus

Notes: A 7-base deletion in the first exon of the NADPH oxidase 2 (Nox2) gene, a 29-base deletion in the first exon of the NADPH oxidase 1 (Nox1) gene, and a one-base insertion in the first exon of the NADPH oxidase 4 (Nox4) gene were introduced by CRISPR/Cas9 in the F344/DuCrj rats. They were then backcrossed to F344/N (Japan SLC, Inc.). This triple Nox knock rats were created by compound crossbreeding of single knockout rats (RGD:598092598, RGD:598092601, RGD:598092602). [National BioResource Project for the Rat in Japan](#)

Catalog Number: 598092603

Background: mutant

Database: Rat Genome Database (RGD)

Database Abbreviation: RGD

Availability: Cryopreserved Sperm (as of 2025-03-28)

Alternate IDs: 598092603

Organism Name: F344-Cybb^{em1Shmo}Nox1^{em1Shmo}Nox4^{em1Shmo}

Record Creation Time: 20250416T090752+0000

Record Last Update: 20260905T135246+0000

Ratings and Alerts

No rating or validation information has been found for F344-Cybb^{em1Shmo}Nox1^{em1Shmo}Nox4^{em1Shmo}.

No alerts have been found for F344-Cybb^{em1Shmo}Nox1^{em1Shmo}Nox4^{em1Shmo}.

Data and Source Information

Source: [Integrated Animals](#)

Source Database: Rat Genome Database (RGD)

Usage and Citation Metrics

We found 2 mentions in open access literature.

Listed below are recent publications. The full list is available at [dkNET](#) .

Huang K, et al. (2026) Endothelial NOX1 Drives Obesity via Skeletal Muscle Mitochondrial Dysfunction. Circulation research, 138(11), e326768.

Zhang Z, et al. (2025) Genetic and Pharmacological Inhibition of NOX4 Protects Against Rhabdomyolysis-Induced Acute Kidney Injury Through Suppression of Endoplasmic Reticulum Stress. Antioxidants (Basel, Switzerland), 14(10).