

Resource Summary Report

Generated by PRECISE-TBI on Jul 31, 2026

LETO

RRID:RGD_68074

Type: Organism

Proper Citation

RRID:RGD_68074

Organism Information

URL: <https://rgd.mcw.edu/rgdweb/report/strain/main.html?id=68074>

Proper Citation: RRID:RGD_68074

Description: Rattus norvegicus with name LETO from RGD.

Species: Rattus norvegicus

Notes: The LETO was obtained by mating of Long-Evan rats in Otsuka Pharmaceutical Co. The LETO has not shown the diabetic syndrome.

Catalog Number: 68074

Background: inbred

Database: Rat Genome Database (RGD)

Database Abbreviation: RGD

Availability: Unknown

Alternate IDs: 68074

Organism Name: LETO

Record Creation Time: 20230509T191928+0000

Record Last Update: 20260725T194230+0000

Ratings and Alerts

No rating or validation information has been found for LETO.

No alerts have been found for LETO.

Data and Source Information

Source: [Integrated Animals](#)

Source Database: Rat Genome Database (RGD)

Usage and Citation Metrics

We found 55 mentions in open access literature.

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

Cho IJ, et al. (2021) Allopurinol ameliorates high fructose diet induced hepatic steatosis in diabetic rats through modulation of lipid metabolism, inflammation, and ER stress pathway. Scientific reports, 11(1), 9894.

Khatun MA, et al. (2020) Obesity preventive function of novel edible mushroom, Basidiomycetes-X (Echigoshirayukidake): Manipulations of insulin resistance and lipid metabolism. Journal of traditional and complementary medicine, 10(3), 245.

Kuno A, et al. (2020) Empagliflozin attenuates acute kidney injury after myocardial infarction in diabetic rats. Scientific reports, 10(1), 7238.

Noguchi R, et al. (2020) Novel oral plasminogen activator inhibitor?1 inhibitor TM5275 attenuates hepatic fibrosis under metabolic syndrome via suppression of activated hepatic stellate cells in rats. Molecular medicine reports, 22(4), 2948.

Itoga A, et al. (2020) Correcting imbalance of sex hormones by a phosphodiesterase 5 inhibitor improves copulatory dysfunction in male rats with type 2 diabetes. BMJ open diabetes research & care, 8(1).

Cho JA, et al. (2020) Exercise and Curcumin in Combination Improves Cognitive Function and Attenuates ER Stress in Diabetic Rats. Nutrients, 12(5).

Li Z, et al. (2020) Effect of fosinopril on the renal cortex protein expression profile of Otsuka Long-Evans Tokushima Fatty rats. Experimental and therapeutic medicine, 19(1), 172.

Baek SM, et al. (2020) SP prevents T2DM complications by immunomodulation. Scientific reports, 10(1), 16753.

Han F, et al. (2019) Salsalate Prevents β -Cell Dedifferentiation in OLETF Rats with Type 2 Diabetes through Notch1 Pathway. Aging and disease, 10(4), 719.

Ikeda A, et al. (2019) The effects of resistance training on bone mineral density and bone quality in type 2 diabetic rats. Physiological reports, 7(6), e14046.

Zhang Y, et al. (2019) Hyperinsulinemia Can Cause Kidney Disease in the IGT Stage of OLETF Rats via the INS/IRS-1/PI3-K/Akt Signaling Pathway. Journal of diabetes research, 2019, 4709715.

Ato S, et al. (2019) Type 2 diabetes causes skeletal muscle atrophy but does not impair resistance training-mediated myonuclear accretion and muscle mass gain in rats. *Experimental physiology*, 104(10), 1518.

Fujita N, et al. (2018) Changes in lipid metabolism and capillary density of the skeletal muscle following low-intensity exercise training in a rat model of obesity with hyperinsulinemia. *PloS one*, 13(5), e0196895.

Nishimura N, et al. (2018) Acyclic retinoid and angiotensin-II receptor blocker exert a combined protective effect against diethylnitrosamine-induced hepatocarcinogenesis in diabetic OLETF rats. *BMC cancer*, 18(1), 1164.

Akagawa M, et al. (2018) Effects of activated vitamin D, alfacalcidol, and low-intensity aerobic exercise on osteopenia and muscle atrophy in type 2 diabetes mellitus model rats. *PloS one*, 13(10), e0204857.

Kim YJ, et al. (2017) Effects of early postnatal environment on hypothalamic gene expression in OLETF rats. *PloS one*, 12(6), e0178428.

Choi MR, et al. (2017) Chronic saponin treatment attenuates damage to the pancreas in chronic alcohol-treated diabetic rats. *Journal of ginseng research*, 41(4), 503.

Namisaki T, et al. (2017) Effect of combined farnesoid X receptor agonist and angiotensin II type 1 receptor blocker on hepatic fibrosis. *Hepatology communications*, 1(9), 928.

Piao SJ, et al. (2017) Beneficial Effects of Aerobic Exercise Training Combined with Rosiglitazone on Glucose Metabolism in Otsuka Long Evans Tokushima Fatty Rats. *Diabetes & metabolism journal*, 41(6), 474.

Minematsu A, et al. (2017) Long-term wheel-running can prevent deterioration of bone properties in diabetes mellitus model rats. *Journal of musculoskeletal & neuronal interactions*, 17(1), 433.