

Resource Summary Report

Generated by [NIF](#) on Aug 3, 2026

B6.129P2-Gulo^{tm1Mae}/Mmucd

RRID:MMRRC_000015-UCD

Type: Organism

Proper Citation

RRID:MMRRC_000015-UCD

Organism Information

URL: https://www.mmrrc.org/catalog/sds.php?mmrrc_id=15

Proper Citation: RRID:MMRRC_000015-UCD

Description: Mus musculus with name B6.129P2-Gulo^{tm1Mae}/Mmucd from MMRRC.

Species: Mus musculus

Notes: Research areas: ; Mutation Type: Targeted Mutation ; Collection:

Phenotype: decreased circulating HDL cholesterol level [MP:0000186]| decreased hematocrit [MP:0000208]| gastrointestinal hemorrhage [MP:0000465]| weight loss [MP:0001263]| anemia [MP:0001577]| postnatal growth retardation [MP:0001732]| hemorrhage [MP:0001914]| premature death [MP:0002083]| decreased erythrocyte cell number [MP:0002875]| joint swelling [MP:0002936]| increased vascular permeability [MP:0003070]| increased circulating cholesterol level [MP:0005178]| decreased mean corpuscular hemoglobin [MP:0005562]| abnormal aorta elastic tissue morphology [MP:0009862]| abnormal aorta endothelium morphology [MP:0009864]| abnormal aorta smooth muscle morphology [MP:0009865]| abnormal vitamin C level [MP:0011229]

Affected Gene: Gulo

Catalog Number: 000015-UCD

Background: Targeted Mutation

Database: Mutant Mouse Resource and Research Center (MMRRC)

Database Abbreviation: MMRRC

Source References: [PMID:10639167](#)

Alternate IDs: MMRRC_15-UCD, MMRRC_000015, MMRRC_15

Organism Name: B6.129P2-*Gulo*^{tm1Mae}/Mmucd

Record Creation Time: 20230308T054750+0000

Record Last Update: 20260801T123200+0000

Ratings and Alerts

No rating or validation information has been found for B6.129P2-*Gulo*^{tm1Mae}/Mmucd.

No alerts have been found for B6.129P2-*Gulo*^{tm1Mae}/Mmucd.

Data and Source Information

Source: [Integrated Animals](#)

Source Database: Mutant Mouse Resource and Research Center (MMRRC)

Usage and Citation Metrics

We found 19 mentions in open access literature.

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

Buchanan RA, et al. (2024) Ascorbate insufficiency disrupts glutamatergic signaling and alters electroencephalogram phenotypes in a mouse model of Alzheimer's disease. *Neurobiology of disease*, 199, 106602.

Armstrong N, et al. (2022) SDHB knockout and succinate accumulation are insufficient for tumorigenesis but dual SDHB/NF1 loss yields SDHx-like pheochromocytomas. *Cell reports*, 38(9), 110453.

Huff TC, et al. (2021) Vitamin C regulates Schwann cell myelination by promoting DNA demethylation of pro-myelinating genes. *Journal of neurochemistry*, 157(6), 1759.

Consoli DC, et al. (2021) Ascorbate deficiency decreases dopamine release in *gulo*^{-/-} and APP/PSEN1 mice. *Journal of neurochemistry*, 157(3), 656.

Boel A, et al. (2020) Slc2a10 knock-out mice deficient in ascorbic acid synthesis recapitulate aspects of arterial tortuosity syndrome and display mitochondrial respiration defects. *Human molecular genetics*, 29(9), 1476.

DiTroia SP, et al. (2019) Maternal vitamin C regulates reprogramming of DNA methylation and germline development. *Nature*, 573(7773), 271.

Eckman J, et al. (2018) Oxidative Stress Levels in the Brain Are Determined by Post-Mortem Interval and Ante-Mortem Vitamin C State but Not Alzheimer's Disease Status. *Nutrients*, 10(7).

Mi DJ, et al. (2018) Altered glutamate clearance in ascorbate deficient mice increases seizure susceptibility and contributes to cognitive impairment in APP/PSEN1 mice. *Neurobiology of aging*, 71, 241.

Gao YL, et al. (2017) The Parenteral Vitamin C Improves Sepsis and Sepsis-Induced Multiple Organ Dysfunction Syndrome via Preventing Cellular Immunosuppression. *Mediators of inflammation*, 2017, 4024672.

Kennard JA, et al. (2014) Intravenous ascorbate improves spatial memory in middle-aged APP/PSEN1 and wild type mice. *Behavioural brain research*, 264, 34.

Ward MS, et al. (2013) Behavioral and monoamine changes following severe vitamin C deficiency. *Journal of neurochemistry*, 124(3), 363.

Pierce MR, et al. (2013) Combined vitamin C and E deficiency induces motor defects in *gulo(-/-)/SVCT2(+/-)* mice. *Nutritional neuroscience*, 16(4), 160.

Jiang H, et al. (2012) Vitamin C activation of the biosynthesis of epoxyeicosatrienoic acids. *Advances in bioscience and biotechnology (Print)*, 3(3), 204.

Meredith ME, et al. (2011) Differential regulation of the ascorbic acid transporter SVCT2 during development and in response to ascorbic acid depletion. *Biochemical and biophysical research communications*, 414(4), 737.

Kasprzak KS, et al. (2011) Effects of ascorbic acid on carcinogenicity and acute toxicity of nickel subsulfide, and on tumor transplants growth in gulonolactone oxidase knock-out mice and wild-type C57BL mice. *Toxicology and applied pharmacology*, 257(1), 32.

Harrison FE, et al. (2010) Vitamin C deficiency increases basal exploratory activity but decreases scopolamine-induced activity in APP/PSEN1 transgenic mice. *Pharmacology, biochemistry, and behavior*, 94(4), 543.

Harrison FE, et al. (2010) Vitamin C distribution and retention in the mouse brain. *Brain research*, 1348, 181.

Harrison FE, et al. (2010) Low ascorbic acid and increased oxidative stress in *gulo(-/-)* mice during development. *Brain research*, 1349, 143.

Harrison FE, et al. (2008) Elevated oxidative stress and sensorimotor deficits but normal cognition in mice that cannot synthesize ascorbic acid. *Journal of neurochemistry*, 106(3), 1198.