

Resource Summary Report

Generated by [dkNET](#) on Aug 5, 2026

BZ555

RRID:WB-STRAIN:WBStrain00004039

Type: Organism

Proper Citation

RRID:WB-STRAIN:WBStrain00004039

Organism Information

URL: <http://www.wormbase.org/db/get?name=WBStrain00004039>

Proper Citation: RRID:WB-STRAIN:WBStrain00004039

Description: Caenorhabditis elegans with name egls1[Pdat-1::gfp] from WB.

Species: Caenorhabditis elegans

Synonyms: egls1[Pdat-1::gfp]

Notes: egls1 [dat-1p::GFP] Bright GFP observable in dopamine neuronal soma and processes. For some reason this strain is resistant to neurotoxic effects of 6-OHDA compared to an independent strain BY200 (Nass et al., 2002). Or maybe BY200 is more sensitive to 6-OHDA due to its co-injection marker gene rol-6?["Mutagen:TMP+UV"]["Mutagen:TMP/UV"]["Supplementary_genotype egls1 [dat-1p::GFP]"]["WBStrain mapped, WBPaper00059778 added based on AFP_Strain data."]["WBStrain mapped, WBPaper00060969 added based on AFP_Strain data."]["[2020-08-03T21:08:32.594Z WBPaper000324] Ressurect Strain: Genotype: egls1[Pdat-1::gfp]"

Affected Gene: WBGene00000934(dat-1)

Genomic Alteration: WBGene00000934(dat-1)

Catalog Number: WB-STRAIN:WBStrain00004039

Database: WormBase (WB)

Database Abbreviation: WB

Availability: available

Source References: [PMID:31323240](#), [PMID:32510332](#), [PMID:33524034](#), [PMID:33674585](#), [PMID:37080524](#), [PMID:37119137](#), [PMID:37155851](#), [PMID:37416472](#), [PMID:37254351](#), [PMID:37828862](#), [PMID:39205325](#), [PMID:39186478](#), [PMID:39369984](#)

Alternate IDs: WB-STRAIN:BZ555, CGC_BZ555

Organism Name: BZ555

Record Creation Time: 20230227T013249+0000

Record Last Update: 20260801T171120+0000

Ratings and Alerts

No rating or validation information has been found for BZ555.

No alerts have been found for BZ555.

Data and Source Information

Source: [Integrated Animals](#)

Source Database: WormBase (WB)

Usage and Citation Metrics

We found 20 mentions in open access literature.

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

Romero-Sanz S, et al. (2025) Rescue of a Rotenone Model of Parkinson's Disease in *C. elegans* by the Mitochondrial Na⁺/Ca²⁺ Exchanger Inhibitor CGP37157. *International journal of molecular sciences*, 26(7).

Balkrishna A, et al. (2025) Neurogrit Gold Attenuates 6-OHDA-Induced Dopaminergic Neurodegeneration in Parkinson's Model of *Caenorhabditis elegans* by Reducing α -Synuclein Accumulation and Pink/Pdr-1 Driven Mitochondrial Dysfunction. *CNS neuroscience & therapeutics*, 31(5), e70401.

Park KH, et al. (2025) Optogenetic induction of TDP-43 aggregation impairs neuronal integrity and behavior in *Caenorhabditis elegans*. *Translational neurodegeneration*, 14(1), 20.

Li L, et al. (2024) *Dendrobium Nobile* Alcohol Extract Extends the Lifespan of *Caenorhabditis elegans* via hsf-1 and daf-16. *Molecules (Basel, Switzerland)*, 29(4).

Zhu FD, et al. (2024) *Carpesii fructus* extract exhibits neuroprotective effects in cellular and *Caenorhabditis elegans* models of Parkinson's disease. *CNS neuroscience & therapeutics*, 30(4), e14515.

Limke A, et al. (2024) Silica Nanoparticles Disclose a Detailed Neurodegeneration Profile throughout the Life Span of a Model Organism. *Journal of xenobiotics*, 14(1), 135.

- Li H, et al. (2024) Dimethylsulfoniopropionate (DMSP) Increases Longevity and Mitochondrial Function in *Caenorhabditis elegans*: Implications for the Role of the Global Sulfur Cycle in Terrestrial Ecosystems. *Environment & health* (Washington, D.C.), 2(8), 572.
- Yin X, et al. (2024) Cysteine protease cathepsin B promotes lysosome integrity to extend the lifespan of alternative day fasting worms. *Aging cell*, 23(11), e14286.
- Ullah I, et al. (2024) Nicotine-mediated therapy for Parkinson's disease in transgenic *Caenorhabditis elegans* model. *Frontiers in aging neuroscience*, 16, 1358141.
- Sun M, et al. (2024) TSG Extends the Longevity of *Caenorhabditis elegans* by Targeting the DAF-16/SKN-1/SIR-2.1-Mediated Mitochondrial Quality Control Process. *Antioxidants* (Basel, Switzerland), 13(9).
- Chen X, et al. (2023) Impaired mitophagosome-lysosome fusion mediates olanzapine-induced aging. *Aging cell*, 22(11), e14003.
- Fu RH, et al. (2023) Syringin Prevents 6-Hydroxydopamine Neurotoxicity by Mediating the MiR-34a/SIRT1/Beclin-1 Pathway and Activating Autophagy in SH-SY5Y Cells and the *Caenorhabditis elegans* Model. *Cells*, 12(18).
- Fok A, et al. (2023) High-fidelity encoding of mechanostimuli by tactile food-sensing neurons requires an ensemble of ion channels. *Cell reports*, 42(5), 112452.
- Petratou D, et al. (2023) A proton-inhibited DEG/ENaC ion channel maintains neuronal ionstasis and promotes neuronal survival under stress. *iScience*, 26(7), 107117.
- Chen KS, et al. (2021) Small molecule inhibitors of α -synuclein oligomers identified by targeting early dopamine-mediated motor impairment in *C. elegans*. *Molecular neurodegeneration*, 16(1), 77.
- Egge N, et al. (2021) Trauma-induced regulation of VHP-1 modulates the cellular response to mechanical stress. *Nature communications*, 12(1), 1484.
- Solano Fonseca R, et al. (2021) Glycolytic preconditioning in astrocytes mitigates trauma-induced neurodegeneration. *eLife*, 10.
- Ke T, et al. (2020) Chronic exposure to methylmercury induces puncta formation in cephalic dopaminergic neurons in *Caenorhabditis elegans*. *Neurotoxicology*, 77, 105.
- Betzer C, et al. (2018) Alpha-synuclein aggregates activate calcium pump SERCA leading to calcium dysregulation. *EMBO reports*, 19(5).
- Büttner S, et al. (2014) Spermidine protects against α -synuclein neurotoxicity. *Cell cycle* (Georgetown, Tex.), 13(24), 3903.