Resource Summary Report

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CL4176

RRID:WB-STRAIN:WBStrain00005113
Type: Organism

Proper Citation

RRID:WB-STRAIN:WBStrain00005113

Organism Information

URL: http://www.wormbase.org/db/get?name=WBStrain00005113

Proper Citation: RRID:WB-STRAIN:WBStrain00005113

Description: Caenorhabditis elegans with name smg-1(cc546ts); dvIs27 [Pmyo-3::human Amyloid beta 1-42; let-851 3'UTR; rol-6(su1006)] from WB.

Species: Caenorhabditis elegans

Synonyms: smg-1(cc546ts); dvIs27 [Pmyo-3::human Amyloid beta 1-42; let-851 3'UTR; rol-6(su1006)]

Notes: dvIs27 [myo-3p::A-Beta (1-42)::let-851 3'UTR) + rol-6(su1006)] X. Rollers. Temperature sensitive: needs to be propagated at 15C. Upshift larval animals to check that the worms get paralyzed and give offspring that arrest as eggs/early larvae. This strain produces low levels of beta amyloid peptide even when grown at low temperature, and therefore there is always some selection for loss of transgene copies. It is recommended to maintain growing stock plates at 15-16 degrees C by transferring small numbers of animals each generation rather than by chunking, which increases the effective population size and therefore the chance of a relatively rare transgene loss, and then this revertant taking over the population. The strain should also be frozen shortly after being received. This strain can only be sent to academic users and not to commercial organizations. [NOTE: The temperature-sensitive allele cc546 causes an M1957L change in SMG-1. The lesion is an atg>ttg transversion in exon 35. Flanking sequences follow with the mutation site indicated with a capital A: ttggtggtcggttacaaaacgatattcaaga tcactggcagtcatgagtAtggttggatcagttttaggactcggtgatcg acatttggacaatttattg The lesion is detectable via SNP-snip with the mutation causing loss of an MslI site. Primers are for a 323 bp product. Digest with MslI to 86+237 in the wild type, uncut as 323 in the mutant. DJR701(f): CAGTCGTGAGCTTTGGATGCGTGC DJR702(r): TCGGGGATACGCAGATTCTTTCCC. Pedone ... Reiner G3 (2021).]|"expresses the human A42 peptide in its body-wall muscle cells in a temperature-sensitive manner."|"Supplementary_genotype (dvIs27[myo-3p::A-Beta (1-42)::let-851 30UTR) C rol-

6(su1006)]) X"|"Supplementary_genotype (smg-1ts[pAF29(myo-3/Ab1-42/let UTR) + pRF4(rol-6(su10069))])"|"Supplementary_genotype smg-1(cc546) I; dvIs27[myo-3p::A-Beta (1-42)::let-851 3'UTR) + rol-6(su1006)] X"|"Supplementary_genotype smg-1(cc546)I;dvIs27[myo-3p::A1-42::let-851 3'UTR + rol-6(su1006)]X"|"WBStrain provided so WBPaper00059477 paper added based on AFP_Strain data."|"[2020-08-03T21:01:59.096Z WBPerson324] Ressurect Strain: Genotype: smg-1(cc546ts); dvIs27 [Pmyo-3::human Amyloid beta 1-42; let-851 3'UTR; rol-6(su1006)]"

Affected Gene: WBGene00004879(smg-1)

Genomic Alteration: WBGene00004879(smg-1)

Catalog Number: WB-STRAIN:WBStrain00005113

Database: WormBase (WB)

Database Abbreviation: WB

Availability: available

Source References: PMID:32966472, PMID:34994366, PMID:37522064, PMID:37113386, PMID:37549461, PMID:37239029, PMID:37726773, PMID:37473700, PMID:37689893, PMID:37957360, PMID:38880519, PMID:38983916, PMID:39281281

Alternate IDs: WB-STRAIN:CL4176, CGC_CL4176

Organism Name: CL4176

Record Creation Time: 20230227T013257+0000

Record Last Update: 20260829T161309+0000

Ratings and Alerts

No rating or validation information has been found for CL4176.

No alerts have been found for CL4176.

Data and Source Information

Source: Integrated Animals

Source Database: WormBase (WB)

Usage and Citation Metrics

We found 24 mentions in open access literature.

Listed below are recent publications. The full list is available at NIF .

Valle-Jiménez X, et al. (2025) Phenolic Acids Commonly Found in Natural Products Modulate Protein Aggregation in Caenorhabditis elegans Neurodegeneration Models. ACS omega, 10(26), 27861.

Araújo-Rodrigues H, et al. (2025) Neuroprotective Effects of Mushroom Biomass Digestive Fractions and Gut Microbiota Metabolites in Microglial and Caenorhabditis elegans Models of Neurodegeneration. Nutrients, 17(24).

Thakkar N, et al. (2025) Withania somnifera root extract reduces susceptibility of the model worm Caenorhabditis elegans to different types of stressors. bioRxiv : the preprint server for biology.

Gioran A, et al. (2024) Beneficial Effects of Sideritis clandestina Extracts and Sideridiol against Amyloid ? Toxicity. Antioxidants (Basel, Switzerland), 13(3).

Wen YP, et al. (2024) Exploring the therapeutic potential of Nelumbo nucifera leaf extract against amyloid-beta-induced toxicity in the Caenorhabditis elegans model of Alzheimer's disease. Frontiers in pharmacology, 15, 1408031.

Yong Y, et al. (2024) A novel ferroptosis inhibitor, Thonningianin A, improves Alzheimer's disease by activating GPX4. Theranostics, 14(16), 6161.

Wang W, et al. (2024) Antioxidant and Neuroprotective Effects of Seed Oils from Trichosanthes kirilowii and T. laceribractea in Caenorhabditis elegans: A Comparative Analysis and Mechanism Study. Antioxidants (Basel, Switzerland), 13(7).

Yu X, et al. (2024) 4,4'-methylenediphenol reduces A?-induced toxicity in a Caenorhabditis elegans model of Alzheimer's disease. Frontiers in aging neuroscience, 16, 1393721.

Zong Y, et al. (2024) Lemneolemnanes A-D, Four Uncommon Sesquiterpenoids from the Soft Coral Lemnalia sp. Marine drugs, 22(4).

Yan L, et al. (2024) Metabolic Regulations of Smilax china L. against ?-Amyloid Toxicity in Caenorhabditis elegans. Metabolites, 14(1).

Navarro-Hortal MD, et al. (2024) In Vitro and In Vivo Insights into a Broccoli Byproduct as a Healthy Ingredient for the Management of Alzheimer's Disease and Aging through Redox Biology. Journal of agricultural and food chemistry, 72(10), 5197.

Tang Y, et al. (2024) Activation of autophagy by Citri Reticulatae Semen extract ameliorates amyloid-beta-induced cell death and cognition deficits in Alzheimer's disease. Neural regeneration research, 19(11), 2467.

Li Y, et al. (2024) Intergenerational epigenetic inheritance mediated by MYS-2/MOF in the pathogenesis of Alzheimer's disease. iScience, 27(8), 110588.

Thakor PM, et al. (2024) Exploring New Schiff Bases: Synthesis, Characterization, and Multifaceted Analysis for Biomedical Applications. ACS omega, 9(33), 35431.

Yu X, et al. (2024) P-hydroxybenzaldehyde protects Caenorhabditis elegans from oxidative stress and ?-amyloid toxicity. Frontiers in aging neuroscience, 16, 1414956.

Ayuda-Durán B, et al. (2024) Insights into the Neuroprotective Potential of Epicatechin: Effects against A?-Induced Toxicity in Caenorhabditis elegans. Antioxidants (Basel, Switzerland), 13(1).

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).

Kakraba S, et al. (2023) Thiadiazolidinone (TDZD) Analogs Inhibit Aggregation-Mediated Pathology in Diverse Neurodegeneration Models, and Extend C. elegans Life- and Healthspan. Pharmaceuticals (Basel, Switzerland), 16(10).

Chamoli M, et al. (2023) A drug-like molecule engages nuclear hormone receptor DAF-12/FXR to regulate mitophagy and extend lifespan. Nature aging, 3(12), 1529.

Wu MC, et al. (2023) Liensinine and neferine exert neuroprotective effects via the autophagy pathway in transgenic Caenorhabditis elegans. BMC complementary medicine and therapies, 23(1), 386.