

Resource Summary Report

Generated by [PRECISE-TBI](#) on Jul 30, 2026

ZG31

RRID:WB-STRAIN:WBStrain00040824

Type: Organism

Proper Citation

RRID:WB-STRAIN:WBStrain00040824

Organism Information

URL: <http://www.wormbase.org/db/get?name=WBStrain00040824>

Proper Citation: RRID:WB-STRAIN:WBStrain00040824

Description: Caenorhabditis elegans with name hif-1(ia4) V. from WB.

Species: Caenorhabditis elegans

Synonyms: hif-1(ia4) V.

Notes: Healthy and fertile in standard lab conditions, but unable to adapt to 1% oxygen. When hif-1(+) animals are incubated in 1% oxygen, >94% will complete embryogenesis and larval development. In contrast, hif-1(ia4) mutants exhibit 66% embryonic lethality and 9% larval lethality in 1% oxygen. The requirement of hif-1 is alleviated if the oxygen level is increased to 2%. The ia4 mutation is a 1231 bp deletion of the second, third, and fourth exons, which encode much of the helix-loop-helix and PAS domains. Analysis of ESTs suggests that there are at least 4 alternatively spliced hif-1 transcripts. The ia4 deletion introduces a frameshift and a premature stop in the three longest forms.|"Made_by: Jiang/Powell-Coffman"|"Reference WBPaper00059755 added based on published strain data identified by Textpresso literature search."|"Supplementary_genotype hif-1(ia4), RE666 ire-1(v33), xbp-1(tm2482)"

Affected Gene: WBGene00001851(hif-1)

Genomic Alteration: WBGene00001851(hif-1)

Catalog Number: WB-STRAIN:WBStrain00040824

Database: WormBase (WB)

Database Abbreviation: WB

Availability: available

Source References: [PMID:32482227](#), [PMID:36653384](#), [PMID:37902464](#), [PMID:38573858](#), [PMID:38986790](#)

Alternate IDs: WB-STRAIN:ZG31, CGC_ZG31

Organism Name: ZG31

Record Creation Time: 20230227T013727+0000

Record Last Update: 20260725T172509+0000

Ratings and Alerts

No rating or validation information has been found for ZG31.

No alerts have been found for ZG31.

Data and Source Information

Source: [Integrated Animals](#)

Source Database: WormBase (WB)

Usage and Citation Metrics

We found 3 mentions in open access literature.

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

Romanelli-Cedrez L, et al. (2024) Rhodoquinone-dependent electron transport chain is essential for *Caenorhabditis elegans* survival in hydrogen sulfide environments. *The Journal of biological chemistry*, 300(9), 107708.

Liu P, et al. (2024) UPRER-immunity axis acts as physiological food evaluation system that promotes aversion behavior in sensing low-quality food. *eLife*, 13.

Dang H, et al. (2023) On the benefits of the tryptophan metabolite 3-hydroxyanthranilic acid in *Caenorhabditis elegans* and mouse aging. *Nature communications*, 14(1), 8338.