

GO:0006695 : cholesterol biosynthetic process
(<https://www.ebi.ac.uk/QuickGO/term/GO:0006695>)
GO:0006694 : steroid biosynthetic process
(<https://www.ebi.ac.uk/QuickGO/term/GO:0006694>)
GO:0045540 : regulation of cholesterol biosynthetic process
(<https://www.ebi.ac.uk/QuickGO/term/GO:0045540>)
GO:0031647 : regulation of protein stability
(<https://www.ebi.ac.uk/QuickGO/term/GO:0031647>)

GO - Cellular Component

GO:0016020 : membrane (<https://www.ebi.ac.uk/QuickGO/term/GO:0016020>)
GO:0005789 : endoplasmic reticulum membrane
(<https://www.ebi.ac.uk/QuickGO/term/GO:0005789>)
GO:0005811 : lipid droplet (<https://www.ebi.ac.uk/QuickGO/term/GO:0005811>)

Presumptive Null

Yes (<https://www.gephebase.org/search-criteria?/and+Presumptive+Null+=^Yes^#gephebase-summary-title>)

Molecular Type

Gene Loss (<https://www.gephebase.org/search-criteria?/and+Molecular+Type=^Gene+Loss^#gephebase-summary-title>)

Aberration Type

Deletion (<https://www.gephebase.org/search-criteria?/and+Aberration+Type=^Deletion^#gephebase-summary-title>)

Deletion Size

unknown

Molecular Details of the Mutation

gene absent in the genome

Experimental Evidence

Candidate Gene (<https://www.gephebase.org/search-criteria?/and+Experimental+Evidence=^Candidate+Gene^#gephebase-summary-title>)

Main Reference

Why do worms need cholesterol?. (2003) (<https://pubmed.ncbi.nlm.nih.gov/12894170>)

Authors

Kurzchalia TV; Ward S

Abstract

Cholesterol is a structural component of animal membranes that influences fluidity, permeability and formation of lipid microdomains. It is also a precursor to signalling molecules, including mammalian steroid hormones and insect ecdysones. The nematode *Caenorhabditis elegans* requires too little cholesterol for it to have a major role in membrane structure. Instead, its most probable signalling functions are to control molting and induce a specialized non-feeding larval stage, although no cholesterol-derived signalling molecule has yet been identified for these or any other functions.

Additional References

Preservation of genes involved in sterol metabolism in cholesterol auxotrophs: facts and hypotheses. (2008) (<https://pubmed.ncbi.nlm.nih.gov/18682733>)

RELATED GEPHE

Related Genes

3 (lanosterol c14 demethylase, squalene synthase, sterol C5 desaturase) (<https://www.gephebase.org/search-criteria?/or+Taxon+ID=^9606^/and+Trait=Cholesterol+metabolism/or+Taxon+ID=^6239^/and+Trait=Cholesterol+metabolism/and+groupHaplotypes=true#gephebase-summary-title>)

Related Haplotypes

1 (<https://www.gephebase.org/search-criteria?/or+Gene+Gephebase=^lanosterol+synthase^/and+Taxon+ID=^9606^/or+Gene+Gephebase=^lanosterol+synthase^/and+Taxon+ID=^6239^#gephebase-summary-title>)

EXTERNAL LINKS

COMMENTS

@ParallelEvolution in insects