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DHCR7 Antibody (C-term) Blocking peptide
Synthetic peptide
Catalog # BP11452b

Specification

DHCR7 Antibody (C-term) Blocking peptide - Product Information

Primary Accession Q9UBM7

DHCR7 Antibody (C-term) Blocking peptide - Additional Information

Gene ID 1717

Other Names
7-dehydrocholesterol reductase, 7-DHC reductase, Putative sterol reductase SR-2, Sterol Delta(7)-reductase, DHCR7, D7SR

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

DHCR7 Antibody (C-term) Blocking peptide - Protein Information

Name DHCR7 (HGNC:2860)

Synonyms D7SR

Function
Oxidoreductase that catalyzes the last step of the cholesterol synthesis pathway, which transforms cholesta-5,7-dien- 3beta-ol (7-dehydrocholesterol,7-DHC) into cholesterol by reducing the C7-C8 double bond of its sterol core (PubMed:25637936, PubMed:38297129, PubMed:38297130, PubMed:9465114, PubMed:9634533). Can also metabolize cholesta-5,7,24-trien-3beta-ol (7-dehydrodemosterol, 7-DHD) to desmosterol, which is then metabolized by the Delta(24)-sterol reductase (DHCR24) to cholesterol (By similarity). Modulates ferroptosis (a form of regulated cell death driven by iron-dependent lipid peroxidation) through the metabolic breakdown of the anti-ferroptotic metabolites 7-DHC and 7-DHD which, when accumulated, divert the propagation of peroxyl radical-mediated damage from phospholipid components to its sterol core, protecting plasma and mitochondrial membranes from phospholipid autoxidation (PubMed:38297129, PubMed:<a

href="http://www.uniprot.org/citations/38297130" target="_blank">38297130).

Cellular Location
Endoplasmic reticulum membrane; Multi-pass membrane protein

Tissue Location
Widely expressed. Most abundant in adrenal gland, liver, testis, and brain.

DHCR7 Antibody (C-term) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

DHCR7 Antibody (C-term) Blocking peptide - Images

DHCR7 Antibody (C-term) Blocking peptide - Background

This gene encodes an enzyme that removes the C(7-8) doublebond in the B ring of sterols and catalyzes the conversion of7-dehydrocholesterol to cholesterol. This gene is ubiquitouslyexpressed and its transmembrane protein localizes to theendoplasmic reticulum membrane and nuclear outer membrane.Mutations in this gene cause Smith-Lemli-Opitz syndrome (SLOS); asyndrome that is metabolically characterized by reduced serumcholesterol levels and elevated serum 7-dehydrocholesterol levelsand phenotypically characterized by mental retardation, facialdysmorphism, syndactyly of second and third toes, andholoprosencephaly in severe cases to minimal physical abnormalitiesand near-normal intelligence in mild cases. Alternative splicingresults in multiple transcript variants that encode the sameprotein.

DHCR7 Antibody (C-term) Blocking peptide - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)Koo, G., et al. Am. J. Med. Genet. A 152A (8), 2094-2098 (2010) :Wang, T.J., et al. Lancet 376(9736):180-188(2010)Ahn, J., et al. Hum. Mol. Genet. 19(13):2739-2745(2010)Jugessur, A., et al. PLoS ONE 5 (7), E11493 (2010) :