

DHCR7 Antibody (C-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5628

Specification

DHCR7 Antibody (C-term) - Product Information

Application	IF, WB,E
Primary Accession	Q9UBM7
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	H=54;M=54 KDa
Isotype	Rabbit IgG
Antigen Source	HUMAN

DHCR7 Antibody (C-term) - Additional Information

Gene ID 1717

Antigen Region
437-463

Other Names

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

Dilution

IF~~1:25
WB~~1:2000

Target/Specificity

This DHCR7 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 437-463 amino acids from the C-terminal region of human DHCR7.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

DHCR7 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

DHCR7 Antibody (C-term) - 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-3 β -ol (7-dehydrocholesterol, 7-DHC) into cholesterol by reducing the C7-C8 double bond of its sterol core (PubMed: [25637936](http://www.uniprot.org/citations/25637936), PubMed: [38297129](http://www.uniprot.org/citations/38297129), PubMed: [38297130](http://www.uniprot.org/citations/38297130), PubMed: [9465114](http://www.uniprot.org/citations/9465114), PubMed: [9634533](http://www.uniprot.org/citations/9634533)). Can also metabolize cholesta-5,7,24-trien-3 β -ol (7-dehydrodesmosterol, 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 peroxy radical-mediated damage from phospholipid components to its sterol core, protecting plasma and mitochondrial membranes from phospholipid autoxidation (PubMed: [38297129](http://www.uniprot.org/citations/38297129), PubMed: [38297130](http://www.uniprot.org/citations/38297130)).

Cellular Location

Endoplasmic reticulum membrane; Multi-pass membrane protein

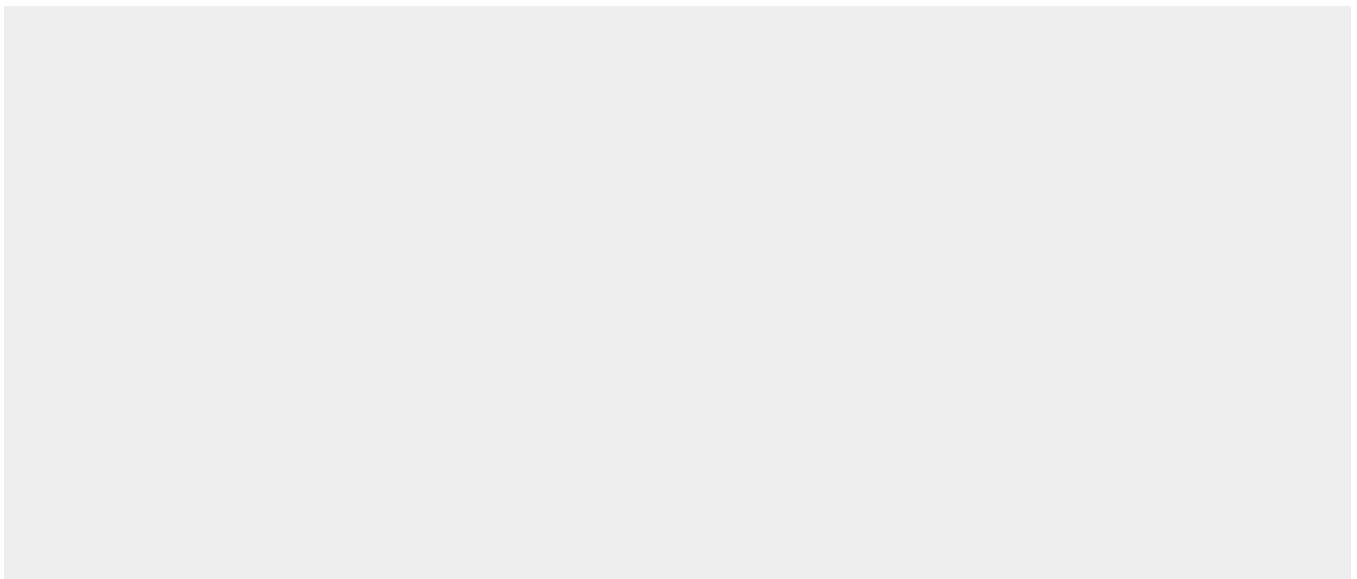
Tissue Location

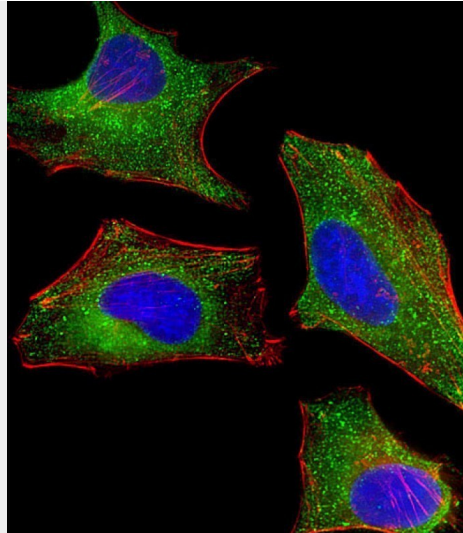
Widely expressed. Most abundant in adrenal gland, liver, testis, and brain.

DHCR7 Antibody (C-term) - Protocols

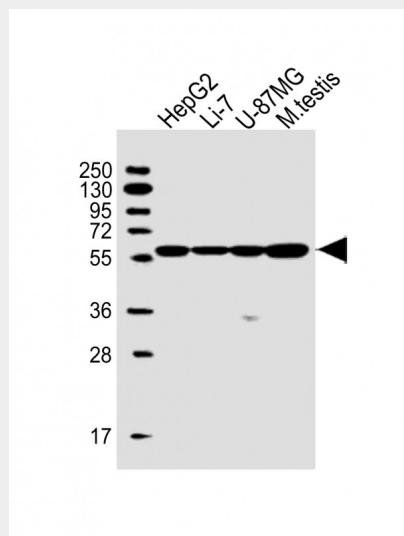
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

DHCR7 Antibody (C-term) - Images



Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (human cervical epithelial adenocarcinoma cell line) cells labeling Pdx1 with AP11452B at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-rabbit IgG (NK179883) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplasm staining on HeLa cell line. Cytoplasmic actin is detected with Dylight® 554 Phalloidin (PD18466410) at 1/100 dilution (red). The nuclear counter stain is DAPI (blue).



All lanes : Anti-DHCR7 Antibody (C-term) at 1:2000 dilution Lane 1: HepG2 whole cell lysate Lane 2: Li-7 whole cell lysate Lane 3: U-87MG whole cell lysate Lane 4: mouse testis lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 54 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

DHCR7 Antibody (C-term) - Background

This gene encodes an enzyme that removes the C(7-8) double bond in the B ring of sterols and catalyzes the conversion of 7-dehydrocholesterol to cholesterol. This gene is ubiquitously expressed and its transmembrane protein localizes to the endoplasmic reticulum membrane and nuclear outer membrane. Mutations in this gene cause Smith-Lemli-Opitz syndrome (SLOS); a syndrome that is metabolically characterized by reduced serum cholesterol levels and elevated serum 7-dehydrocholesterol levels

and phenotypically characterized by mental retardation, facial dysmorphism, syndactyly of second and third toes, and holoprosencephaly in severe cases to minimal physical abnormalities and near-normal intelligence in mild cases. Alternative splicing results in multiple transcript variants that encode the same protein.

DHCR7 Antibody (C-term) - 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) :