

#2033 Store at -20°C

DHCR24/Seladin-1 (C59D8) Rabbit mAb

100 μl
 (10 western blots)



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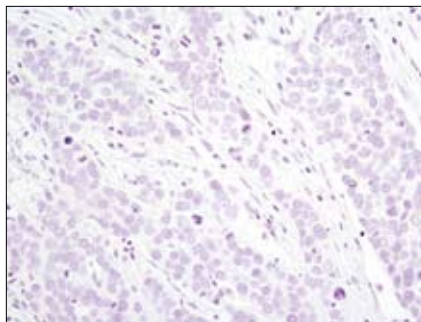
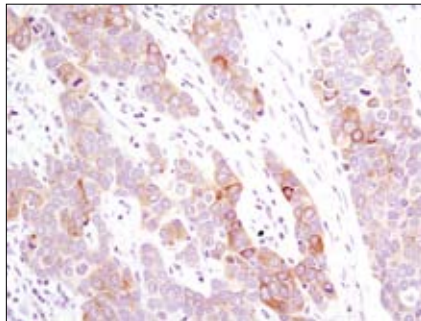
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IHC-P Endogenous	H, M	54 kDa	Rabbit IgG**

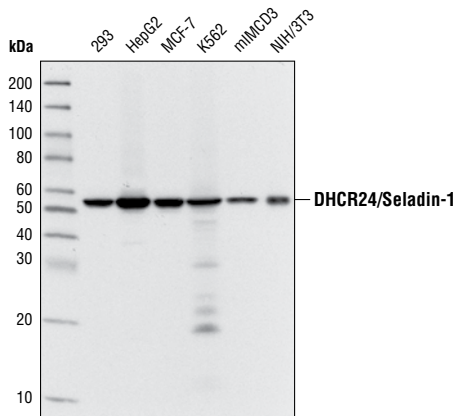
Background: DHCR24/Seladin-1 was identified as a molecular basis for desmosterolosis (1). It encodes for 24-dehydrocholesterol reductase (3 β -hydroxysterol Δ 24-reductase). This enzyme reduces desmosterol in cholesterol biosynthesis (1). Recessive mutations in this gene in desmosterolosis patients lead to a defective enzyme resulting in increased levels of desmosterol (1). DHCR24/Seladin-1 is induced upon oxidative stress and was found to mediate Ras-induced senescence resulting from increased reactive oxygen species (2). Studies further indicate that the level of DHCR24/Seladin-1 is induced in the acute response and reduced in the chronic response to oxidative stress in a cholesterol dependent manner (3). Moreover, overexpression of DHCR24/Seladin-1 bearing two mutations that abolish its reductase activity causes the cells to lose protection from oxidative stress (3). These findings thus link the reductase activity of DHCR24/Seladin-1 to its protective role in oxidative stress. This enzyme has also been demonstrated to be a hydrogen peroxide scavenger (4).

Specificity/Sensitivity: DHCR24/Seladin-1 (C59D8) Rabbit mAb detects endogenous levels of total DHCR24/Seladin-1 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the sequence of human DHCR24/Seladin-1.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma using DHCR24/Seladin-1 (C59D8) Rabbit mAb in the presence of control peptide (upper) or antigen-specific peptide (lower).



Western blot analysis of extracts from various cell types using DHCR24/Seladin-1 (C59D8) Rabbit mAb.

Background References:

- (1) Waterham, H.R. et al. (2001) *Am J Hum Genet* 69, 685–94.
- (2) Wu, C. et al. (2004) *Nature* 432, 640–5.
- (3) Kuehnle, K. et al. (2008) *Mol Cell Biol* 28, 539–50.
- (4) Lu, X. et al. (2008) *Endocrinology*, Epub ahead of print.

Entrez-Gene ID #1718
Swiss-Prot Acc. #Q15392

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 $\mu\text{g/ml}$ BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C . Do not aliquot the antibody.

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50
Immunohistochemistry (Paraffin)	1:100
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain [®] Antibody Diluent #8112

For application specific protocols please see the web page for this product at www.cellsignaling.com.

Please visit www.cellsignaling.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

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Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.