Revision 1

DHCR24/Seladin-1 (C59D8) Rabbit mAb

Store at -20C

#2033

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IHC-P	H M	Endogenous	54	Rabbit IgG	#Q15392	1718

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
Immunohistochemistry (Paraffin)	1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

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.

Background

DHCR24/Seladin-1 was identified as a molecular basis for desmosterolosis (1). It encodes for 24-dehydrocholesterol reductase (3β-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 acitivity 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).

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* 149, 3267-73.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin)

Cross-Reactivity Key

H: Human **M:** Mouse

Trademarks and Patents

Limited Uses

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