

# DECR1 (D-15): sc-102475

## BACKGROUND

$\beta$ -oxidation refers to the enzymatic process by which Acyl-CoA is catalytically broken down to yield Acetyl-CoA, the first molecule required for the Krebs cycle. DECR1 (2,4-dienoyl-CoA reductase, mitochondrial), also known as DECR, is a 335 amino acid mitochondrial protein that exists as a homotetramer and belongs to the family of short-chain dehydrogenases/reductases. Expressed in heart, pancreas, liver, lung, kidney and skeletal muscle, DECR1 functions as an auxiliary enzyme of  $\beta$ -oxidation where it participates in the metabolism of unsaturated fatty enoyl-CoA esters. Specifically, DECR1 uses NADP<sup>+</sup> to catalyze the reduction of 2,4-dienoyl-CoA to yield trans-3-enoyl-CoA, which can then be used as an intermediate in the Krebs cycle. Additionally, DECR1 is thought to function as a tumor suppressor, possibly downregulating the expression of Neu and slowing the rate of tumorigenesis.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: DECR1 (human) mapping to 8q21.3; Decr1 (mouse) mapping to 4 A2.

## SOURCE

DECR1 (D-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of DECR1 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-102475 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

DECR1 (D-15) is recommended for detection of DECR1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with family member DECR2.

DECR1 (D-15) is also recommended for detection of DECR1 in additional species, including equine and porcine.

Suitable for use as control antibody for DECR1 siRNA (h): sc-77514, DECR1 siRNA (m): sc-142951, DECR1 shRNA Plasmid (h): sc-77514-SH, DECR1 shRNA Plasmid (m): sc-142951-SH, DECR1 shRNA (h) Lentiviral Particles: sc-77514-V and DECR1 shRNA (m) Lentiviral Particles: sc-142951-V.

Molecular Weight of DECR1: 36 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **DECR1 (G-10): sc-393473** or **DECR1 (30-P): sc-130369**, our highly recommended monoclonal alternatives to DECR1 (D-15).