

# IDI1 (XY-7): sc-100550

## BACKGROUND

IDI1 (isopentenyl-diphosphate  $\delta$  isomerase 1), also known as IPP1 or IPP11, is a 227 amino acid member of the IPP isomerase type I family and is involved in cholesterol biosynthesis. Localized to the peroxisome, IDI1 catalytically converts isopentenyl diphosphate (IPP) to its electrophilic isomer, dimethylallyl diphosphate (DMAPP). Specifically, IDI1 uses magnesium as a cofactor to catalyze the 1,3-allylic rearrangement of IPP, thus creating DMAPP, a substrate for subsequent reactions that synthesize farnesyl diphosphate and, ultimately, cholesterol. Defects in the gene encoding IDI1 may be associated with peroxisomal deficiency diseases, such as Zellweger syndrome, a congenital disorder caused by a reduction in the number of peroxisomes. Individuals affected with this disorder generally exhibit lack of muscle tone, an enlarged liver, mental retardation and, in some cases, death.

## REFERENCES

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2. Krisans, S.K., Ericsson, J., Edwards, P.A. and Keller, G.A. 1994. Farnesyl-diphosphate synthase is localized in peroxisomes. *J. Biol. Chem.* 269: 14165-14169.
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4. Paton, V.G., Shackelford, J.E. and Krisans, S.K. 1997. Cloning and subcellular localization of hamster and rat isopentenyl-diphosphate dimethylallyl diphosphate isomerase. A PTS1 motif targets the enzyme to peroxisomes. *J. Biol. Chem.* 272: 18945-18950.
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8. Zheng, W., Sun, F., Bartlam, M., Li, X., Li, R. and Rao, Z. 2007. The crystal structure of human isopentenyl-diphosphate isomerase at 1.7 Å resolution reveals its catalytic mechanism in isoprenoid biosynthesis. *J. Mol. Biol.* 366: 1447-1458.

## CHROMOSOMAL LOCATION

Genetic locus: IDI1 (human) mapping to 10p15.3.

## SOURCE

IDI1 (XY-7) is a mouse monoclonal antibody raised against recombinant IDI1 of human origin.

## PRODUCT

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

## APPLICATIONS

IDI1 (XY-7) is recommended for detection of IDI1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IDI1 siRNA (h): sc-90838, IDI1 shRNA Plasmid (h): sc-90838-SH and IDI1 shRNA (h) Lentiviral Particles: sc-90838-V.

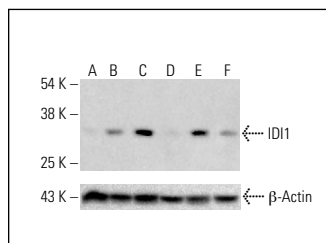
Molecular Weight of IDI1: 26 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

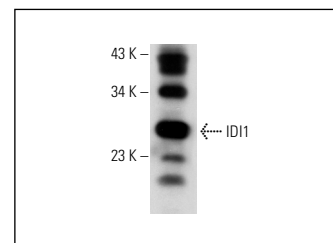
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



IDI1 (XY-7): sc-100550. Western blot analysis of IDI1 expression in untreated HeLa (A), chemically-treated HeLa (B, C), untreated K-562 (D) and chemically-treated K-562 (E, F) whole cell lysates.  $\beta$ -Actin (C4): sc-47778 used as loading control. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.



IDI1 (XY-7): sc-100550. Western blot analysis of IDI1 expression in HeLa whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Brisdelli, F., Di Francesco, L., Giorgi, A., Lizzi, A.R., Luzi, C., Mignogna, G., Bozzi, A. and Schininà, M.E. 2019. Proteomic analysis of quercetin-treated K562 cells. *Int. J. Mol. Sci.* 21 pii: E32.

## 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.