

DHDH (N-14): sc-161530

BACKGROUND

DHDH (*trans*-1,2-dihydrobenzene-1,2-diol dehydrogenase), also known as 2DD, D-xylose 1-dehydrogenase, D-xylose-NADP dehydrogenase or dimeric dihydrodiol dehydrogenase, is a 334 amino acid protein belonging to the gfo/idh/mocA family. DHDH catalyzes the NADP⁺-linked oxidation of *trans*-dihydrodiols of aromatic hydrocarbons to the corresponding catechols. DHDH also catalyzes the conversion of D-xylose and NADP⁺ to D-xylono-1,5-lactone and NADPH. Expressed in small intestine, DHDH forms a homodimer. The gene encoding DHDH maps to human chromosome 19q13.33 and mouse chromosome 7 B4. Human chromosome 19 consists of approximately 63 million bases, makes up over 2% of human genomic DNA and is the genetic home for a number of immunoglobulin superfamily members including the killer cell and leukocyte Ig-like receptors.

REFERENCES

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2. Asada, Y., et al. 2000. Roles of His-79 and Tyr-180 of D-xylose/dihydrodiol dehydrogenase in catalytic function. *Biochem. Biophys. Res. Commun.* 278: 333-337.
3. Online Mendelian Inheritance in Man, OMIM[™]. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 606377. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/606377>
4. Grimwood, J., et al. 2004. The DNA sequence and biology of human chromosome 19. *Nature* 428: 529-535.
5. Parham, P. 2005. Immunogenetics of killer cell immunoglobulin-like receptors. *Mol. Immunol.* 42: 459-462.
6. Carbone, V., et al. 2008. Structural and functional features of dimeric dihydrodiol dehydrogenase. *Cell. Mol. Life Sci.* 65: 1464-1474.
7. Chang, H.C., et al. 2009. Overexpression of dihydrodiol dehydrogenase as a prognostic marker in resected gastric cancer patients. *Dig. Dis. Sci.* 54: 342-347.

CHROMOSOMAL LOCATION

Genetic locus: DHDH (human) mapping to 19q13.33.

SOURCE

DHDH (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DHDH of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-161530 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

DHDH (N-14) is recommended for detection of DHDH of 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).

DHDH (N-14) is also recommended for detection of DHDH in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for DHDH siRNA (h): sc-97376, DHDH shRNA Plasmid (h): sc-97376-SH and DHDH shRNA (h) Lentiviral Particles: sc-97376-V.

Molecular Weight of DHDH: 36 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.