

DHTKD1 (F-11): sc-398620

BACKGROUND

The 2-oxoglutarate dehydrogenase complex catalyzes the overall conversion of 2-oxoglutarate to succinyl-CoA and CO₂. The complex contains multiple copies of three enzymatic components: 2-oxoglutarate dehydrogenase (E1), dihydroliipoamide succinyltransferase (E2) and lipoamide dehydrogenase (E3). DHTKD1 (probable 2-oxoglutarate dehydrogenase E1 component DHKTD1, mitochondrial), also known as KIAA1630 or dehydrogenase E1 and transketolase domain-containing protein 1, is a 919 amino acid protein belonging to the α-ketoglutarate dehydrogenase family. Thiamine pyrophosphate serves as the cofactor for DHKTD1, which is localized to the mitochondrion. The gene encoding DHTKD1 maps to human chromosome 10p14 and mouse chromosome 2 A1.

REFERENCES

1. Rice, J.E. and Lindsay, J.G. 1991. Evidence for a protein X-like domain at the N-terminus of the E1 component of the mammalian 2-oxoglutarate dehydrogenase complex. *Biochem. Soc. Trans.* 19: 403S.
2. Fukushima, N., et al. 1995. Establishment and structural analysis of human mAb to the E2 component of the 2-oxoglutarate dehydrogenase complex generated from a patient with primary biliary cirrhosis. *Int. Immunol.* 7: 1047-1055.
3. Nagase, T., et al. 2000. Prediction of the coding sequences of unidentified human genes. XVIII. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. *DNA Res.* 7: 273-281.

CHROMOSOMAL LOCATION

Genetic locus: DHTKD1 (human) mapping to 10p14; Dhtkd1 (mouse) mapping to 2 A1.

SOURCE

DHTKD1 (F-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 598-637 within an internal region of DHTKD1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DHTKD1 (F-11) is available conjugated to agarose (sc-398620 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398620 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398620 PE), fluorescein (sc-398620 FITC), Alexa Fluor® 488 (sc-398620 AF488), Alexa Fluor® 546 (sc-398620 AF546), Alexa Fluor® 594 (sc-398620 AF594) or Alexa Fluor® 647 (sc-398620 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398620 AF680) or Alexa Fluor® 790 (sc-398620 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398620 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

DHTKD1 (F-11) is recommended for detection of DHTKD1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for DHTKD1 siRNA (h): sc-90728, DHTKD1 siRNA (m): sc-143036, DHTKD1 shRNA Plasmid (h): sc-90728-SH, DHTKD1 shRNA Plasmid (m): sc-143036-SH, DHTKD1 shRNA (h) Lentiviral Particles: sc-90728-V and DHTKD1 shRNA (m) Lentiviral Particles: sc-143036-V.

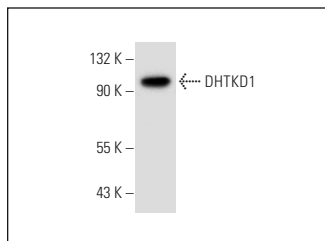
Molecular Weight of DHTKD1: 103 kDa.

Positive Controls: human liver extract: sc-363766.

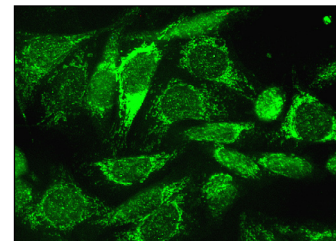
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



DHTKD1 (F-11): sc-398620. Western blot analysis of DHTKD1 expression in human liver tissue extract.



DHTKD1 (F-11): sc-398620. Immunofluorescence staining of formalin-fixed SW480 cells showing mitochondrial localization.

SELECT PRODUCT CITATIONS

1. Chen, Z., et al. 2021. Strategy for scanning peptide-coding circular RNAs in colorectal cancer based on bioinformatics analysis and experimental assays. *Front. Cell Dev. Biol.* 9: 815895.

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.