

APH838Hu01 100µg

Active Isocitrate Dehydrogenase 2, mitochondrial (IDH2)

Organism Species: *Homo sapiens* (Human)

Instruction manual

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Ala40~Gln452

Tags: N-terminal His-tag

Purity: >90%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 5%Trehalose .

Original Concentration: 200µg/mL

Applications: Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 8.3

Predicted Molecular Mass: 50.3kDa

Accurate Molecular Mass: 50kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

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A DKRIKVAKPV
VEMDGDENR IIWQFIKEKL ILPHVDIQLK YFDLGLPNRD QTDDQVTIDS
ALATQKYSVA VKCATITPDE ARVEEFKLLK MWKSPNGTIR NILGGTVFRE
PIICKNIPRL VPGWTKPITI GRHAHGQYK ATDFVADRAG TFKMVFTPKD
GSGVKEWEVY NFPAGGVGMG MYNTDEISG FAHSCFQYAI QKKWPLYMST
KNTILKAYDG RFKDIFQEIF DKHYKTDGDK NKIWEHRLI DDMVAQVLKS
SGGFVWACKN YGDVQSDIL AQFGSLGLM TSVLVCPDGK TIEEAAHGT
VTRHYREHQK GRPTSTNPIA SIFAWTRGLE HRGKLDGNQD LIRFAQMLEK
VCVETVESGA MTKDLAGCIH GLSNVKLNEH FLNTTDFLDT IKSNDRALG
RQ
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[ACTIVITY]

Isocitrate Dehydrogenase 2 (IDH2) catalyzes the oxidative decarboxylation of isocitrate to alpha-ketoglutarate. There are two subclasses in the IDH family, one of them utilizing NADP⁺ as the electron acceptor and the other using NAD⁺. The protein encoded by this gene is the NADP⁺ dependent isocitrate dehydrogenase found in the mitochondrial. The activity of recombinant human IDH2 was measured by the ability to oxidatively decarboxylate isocitrate to 2-oxoglutarate. The reaction was performed in 25 mM Tris, 0.5 mM MnCl₂, 5 mM DTT, pH 7.5 (Assay Buffer), initiated by addition 50 μL of various concentrations of IDH2 (diluted by Assay Buffer) to 50 μL of substrate mixture consisted of 1 mM NADP⁺ and 2 mM isocitric acid. The final well serves as a negative control with no IDH2, replaced with 50 μL assay buffer. Incubated at 25 °C for 5min, then read at a wavelength of 340 nm. The specific activity of recombinant human IDH2 is >200

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.