

Isocitrate Dehydrogenase 2, mitochondrial (IDH2) Active Protein | IDH2 active protein

Active Isocitrate Dehydrogenase 2, mitochondrial (IDH2)

CATALOG # AAA161929	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Isocitrate Dehydrogenase 2; mitochondrial (IDH2); Active Isocitrate Dehydrogenase 2; mitochondrial; IDH; IDP; ICD-M; IDHM; mNADP-IDH; Isocitrate dehydrogenase [NADP]; Oxalosuccinate decarboxylase4; IDH2 active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 90% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	Ala40~Gln4 52
Applicable Applications for IDH2 active protein	Activity Assay, Cell Culture
Species	Human
Expression System	Prokaryotic expression
Tag	N-terminal His Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	8.3
Research Area	Enzyme & Kinase
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months

IMAGES

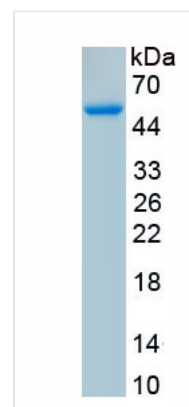
Specific Activity (pmol/min/ug)=

$$\frac{\text{Adjusted } V_{max}^* \text{ (OD/min)} \times \text{well volume (L)} \times 10^{12} \text{ pmol/mol}}{\text{ext. coeff}^{**} \text{ (M}^{-1}\text{cm}^{-1}) \times \text{path corr.}^{***} \text{ (cm)} \times \text{amount of enzyme (ug)}}$$

*Adjusted for Substrate Blank
**Using the extinction coefficient 6270 M⁻¹cm⁻¹
***Using the path correction 0.320 cm

Bioactivity

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 uL of various concentrations of IDH2 (diluted by Assay Buffer) to 50 uL 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 50ul assay buffer. Incubated at 25 degree C for 5min, then read at a wavelength of 340 nm. The specific activity of recombinant human IDH2 is >200 pmol/min/ug.



SDS-PAGE

Figure. SDS-PAGE

ADDITIONAL INFORMATION

Product Categories/Family for IDH2 active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	28178832
NCBI GeneID	3418
NCBI Accession #	NP_002159.2
NCBI GenBank Nucleotide #	NM_002168.2
UniProt Accession #	P48735; Q96GT3; B2R6L6
Molecular Weight	452
NCBI Official Full Name	isocitrate dehydrogenase
NCBI Official Synonym Full Names	isocitrate dehydrogenase 2 (NADP+), mitochondrial
NCBI Official Symbol	IDH2
NCBI Official Synonym Symbols	IDH; IDP; IDHM; IDPM; ICD-M; D2HGA2; mNADP-IDH
NCBI Protein Information	isocitrate dehydrogenase [NADP], mitochondrial; isocitrate dehydrogenase [NADP], mitochondrial; NADP(+)-specific ICDH; oxalosuccinate decarboxylase
UniProt Protein Name	Isocitrate dehydrogenase [NADP], mitochondrial
UniProt Gene Name	IDH2
UniProt Synonym Gene Names	IDH
UniProt Entry Name	IDHP_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/isocitrate-dehydrogenase-2-mitochondrial-idh2/161929>