BellBrook Labs

certificate of analysis

IDH1 Enzyme, Active, Human

Part Number	2395 (5 µg), 2396 (50 µg)	**Lot Number**	15234

Product Information	
General	IDH1 Enzyme is a full-length human enzyme with an N-terminal 6xHis tag.
Storage and Handling	Store at **-80°C**. Use IDH1 within 6 months of receiving date. Minimize freeze-thaws and aliquot if necessary.
Storage Buffer	50 mM Tris-HCl, 100 mM NaCl, 20% Glycerol, 1 mM TCEP, pH 7.5
Purity	≥95% as determined by SDS-PAGE
Expression	*E. coli*

Product Specifications	
Molecular Weight	47.48 kDa
Concentration	0.28 mg/mL (5.9 µM)

IDH1 Enzyme: Activity

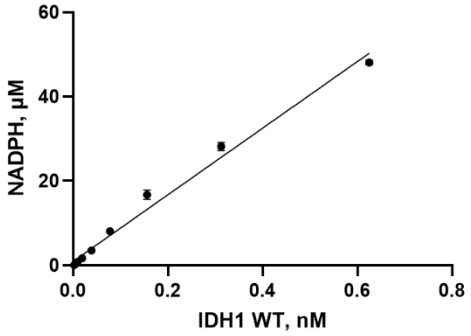

Figure 1. IDH1 Enzyme NADPH Formation Rate (**22.9 sec^{-1}**).

IDH1 Enzyme, Human: Functional Activity Testing

Rate of NADPH depletion was measured using the Hydriscreener™ NADPH Assay. The 10 µL Enzyme Reaction contained IDH1 with 20 µM NADPH and 1 mM α-ketoglutarate in 1X Assay Buffer (25 mM Tris, 10 mM $MgCl_2$, 150 mM NaCl, and 0.03% BSA). The reaction was incubated at 30°C for 60 minutes in a Corning® low-volume 384-well black plate (#4514). Following the incubation, 10 µL of Detect Mix containing the Converting Enzyme in 1X HydriFluor™ Solution and 1X Stop & Detect Buffer B was added to each well and incubated at room temperature for 60 minutes. The 20 µL Complete Reaction was read on CLARIOstar Plus instrument. RFU values were converted to NADPH formation with a 20 µM NADPH Standard Curve and were plotted using Prism (GraphPad). Under these conditions, it is recommended to use IDH1 Enzyme in the 10 µL Enzyme Reaction at a concentration between 25-50% substrate conversion for a robust signal in the linear range.

IDH1 Enzyme, Human: Amino Acid Sequence

Number of Amino Acids: 420 (6xHis 2-7)

MHHHHHHSKKISGGSVVEMQGDEMTRIIWELIKEKLIFPYVELDLHSYDLGIENRDATNDQVTKDAAEAIKKHNVGVKCATITPDEKRVEEFKLKQMWKSPNGTIRNILGGTVF REAIICKNIPRLVSGWVKPIIIGRHAYGDQYRATDFVVPGPGKVEITYTPSDGTQKVTYLVHNFEEGGGVAMGMYNQDKSIEDFAHSSFQMALSKGWPLYLSTKNTILKKYDGR FKDIFQEIYDKQYKSQFEAQKIWYEHRLIDDMVAQAMKSEGGFIWACKNYDGDVQSDSVAQGYGSLGMMTSVLVCPDGKTVEAEAAHGTVTRHYRMYQKGQETSTNPIASI FAWTRGLAH RAKLDNNKELAFFANALEEVSIETIEAGFMTKDLAACIKGLPNVQRSDYLNTFEFMDKLGENLKIKLAQAKL

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