BellBrook Labs

certificate of analysis

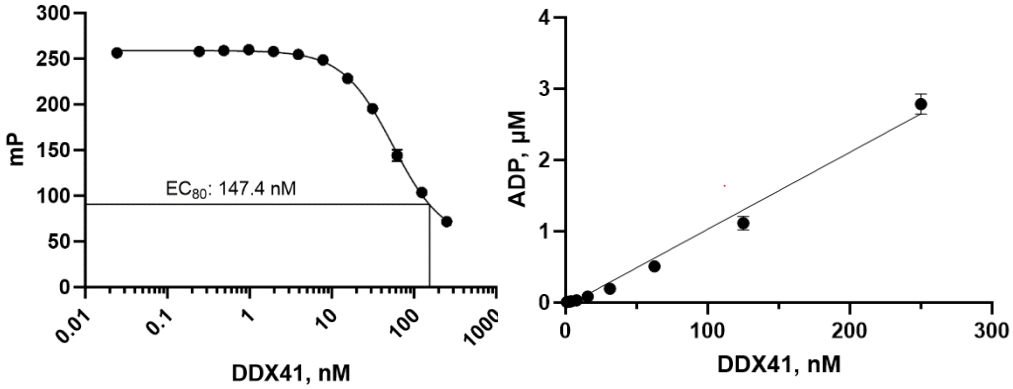
DDX41 Enzyme, Active, Human

Part number: 2316
Lot number: 14737A

General: DDX41 enzyme is a full length, recombinant human enzyme with an N-terminal 6xHis-TEV site tag.
Storage and Handling: Store at -80°C, minimize freeze-thaws.
Purity: ≥70% as determined by SDS-PAGE
Expression: Baculovirus

Part	Lot	Description	Composition	Concentration	Rate*	Volume	Storage
2316	14737A	500 µg human DDX41 enzyme, 72.3 kDa	50 mM Tris-HCl, 200 mM NaCl, 0.5 mM TCEP and 10% Glycerol, pH 7.5	0.36 mg/mL (4.98 µM)	10.8 $hour^{-1}$	1.39 mL	-80°C

*Rate of ADP formation measured using Transcreener® ADP^2 FP Assay



DDX41 Enzyme, Human: Functional Activity

Activity was measured using the Transcreener® ADP^2 FP Assay (15 µM ATP and 0.5 mg/mL Yeast RNA substrate mix in 50 mM Tris-HCl pH 7.5, 2 mM $MgCl_2$, and 0.01% Triton X-100); 10 µL Enzyme Reaction incubated @ 30°C for 60 minutes in a Corning® low-volume 384-well plate (#4514). 20 µL Complete Reaction read on CLARIOstar Plus instrument. Fluorescent polarization values were converted to ADP formation with a 15 µM ADP Standard Curve and ADP formation was plotted using Prism (GraphPad). Under these conditions, it is recommended to use DDX41 Enzyme in the 10 µL Enzyme Reaction at a concentration between the EC_{50} and EC_{80} of the enzyme titration for a robust signal in the linear range.

DDX41 Enzyme, Human: Amino Acid Sequence

Number of Amino Acids: 643

**MHHHHHHSSGVDLGTENLYFQSEESEPERKRARTDEVPAGGSRSEAEDEDDEDYVPYVPLRQRRQLLLQKLLQRRRKGAAEEEQQDSGSE
PRGDEDDIPLGPQSNVSLLDQHQHLKEKAEARKESAKEKQLKEEEKILESVAEGRALMSVKEMAKGITYDDPIKTSWTPPRYVLSMSEERHE
RVRKKYHILVEGDGIPPPIKSFKEMKFPAAILRGLKKKGIHHPTPIQIQGIPTILSGRDMIGIAFTGSGKTLVFTLPVIMFCLEQEKRLPFSKREGP
YGLIICPSRELARQTHGILEYYCRLLQEDSSPLLRCALCIGGMSVKEQMETIRHGVHMMVATPGRLMDLLQKKMVSLDICRYLALDEADRMID
MGFEGDIRTIFSYFKGQRQTLLFSATMPKKIQNFAKSALVKPVTINVGRAGAASLDVIQEVEYVKEEAKMVYLLECLQKTPPPVLIFAEKKADV
DAIHEYLLLKGVEAVAIHGGKDQEERTKAIEAFREGKKDVLVATDVASKGLDFPAIQHVINYDMPEEIENYVHRIGRTGRSGNTGIATTFINKAC
DESVLMDLKALLLEAKQKVPPVLQVLHCGDESMLDIGGERGCAFCGGLGHRITDCPKLEAMQTKQVSNIGRKDYLAHSSMDF**

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