Recombinant IDH2 (R140Q) protein

Catalog No: 31617, 31717
Lot No: 28818001
Expressed In: Baculovirus

Quantity: 100, 1000 µg
Concentration: 0.35 µg/µl
Source: Human

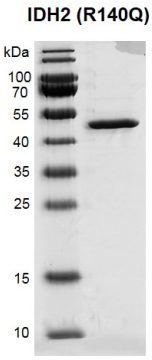
Buffer Contents: Recombinant IDH2 (R140Q) protein is supplied in 25 mM HEPES-NaOH pH 7.5, 300 mM NaCl, 10% glycerol, 0.04% Triton X-100, and 0.5 mM TCEP.

Background: IDH2 (Isocitrate Dehydrogenase (NADP(+)) 2, Mitochondrial, also known as MNADP-IDH, D2HGA2, IDHM, IDH, IDPM, IDC-M) is a member of isocitrate dehydrogenases, which catalyze the oxidative decarboxylation of isocitrate to 2-oxoglutarate. IDH2 is found in the mitochondria. It plays a role in intermediary metabolism and energy production. This protein may tightly associate or interact with the pyruvate dehydrogenase complex. Mutations in IDH1 and IDH2 frequently occur in grade II-III gliomas, secondary glioblastomas and acute myeloid leukemias (AML). To date, mutations in at least four active site arginine residues IDH1 R100, IDH1 R132, IDH2 R140, and IDH2 R172 have been shown to result in the neomorphic production of R(-)-2-hydroxyglutarate (2HG), although these mutants lack the wild-type enzyme's ability to convert isocitrate to α-ketoglutarate (α-KG, 2OG).

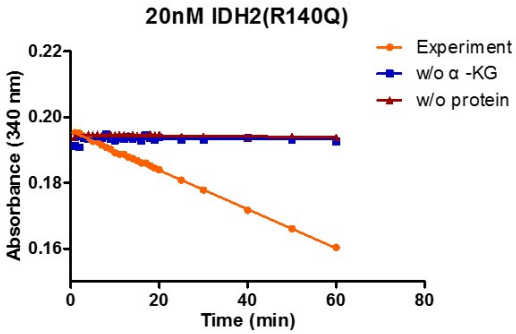
Protein Details: Recombinant IDH2 (R140Q) protein was expressed in baculovirus system as the full length protein (accession number NP_002159.2) with a point mutation Arg140Gln and a C-terminal FLAG-Tag. The molecular weight of the protein is 52.6 kDa.

Application Notes: This protein is useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.



Recombinant IDH2 (R140Q) protein
12.5% SDS-PAGE Coomassie staining
MW: 52.6 kDa
Purity: > 96%



Recombinant IDH2 (R140Q) protein activity assay
20 µM NADPH and 1 µM α-Ketoglutaric acid were incubated with 20 nM IDH2 (R140Q) protein in a reaction system containing 50 mM Tris-HCl pH 7.4, 150 mM NaCl, 10 mM MgCl2 and 0.03% BSA at room temperature. Depletion of NADPH was monitored continuously at absorbance 340 nm for 60 min.