

**Catalog No:** 31615, 31715

**Expressed In:** Baculovirus

**Quantity:** 100, 1000 µg

**Concentration:** 0.5 µg/µl

**Source:** Human

**Buffer Contents:** Recombinant IDH2 protein is supplied at a concentration of 0.5 µg/µl in 25 mM HEPES pH 7.5, 300 mM NaCl, 5% glycerol, 0.04% Triton X-100, 0.2 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. Isocitrate dehydrogenases belong to two distinct subclasses, one of which utilizes NAD(+) as the electron acceptor and the other NADP(+). Five isocitrate dehydrogenases have been reported: three NAD(+)-dependent isocitrate dehydrogenases, which localize to the mitochondrial matrix, and two NADP(+)-dependent isocitrate dehydrogenases, one of which is mitochondrial and the other predominantly cytosolic. Each NADP(+)-dependent isozyme is a homodimer.

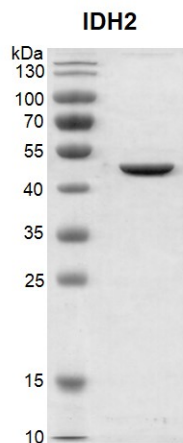
IDH2 is a NADP(+)-dependent isocitrate dehydrogenase found in the mitochondria. It plays a role in intermediary metabolism and energy production. This protein may tightly associate or interact with the pyruvate dehydrogenase complex.

**Protein Details:** Recombinant IDH2 protein was expressed in Baculovirus system as the full length protein (accession number NP\_002159.2) with a C-terminal FLAG-Tag. The molecular weight of the protein is 51.7 kDa.

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

**Activity Assay Conditions:** 200 µM DL-isocitric acid trisodium and 200 µM NADP+ were incubated with IDH2 protein in reaction buffer including 50 mM Tris-HCl pH 7.4, 100 mM MgCl<sub>2</sub> for 10 minutes at room temperature. The generation of product NADPH was monitored by measuring absorbance at 340 nm.

**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.

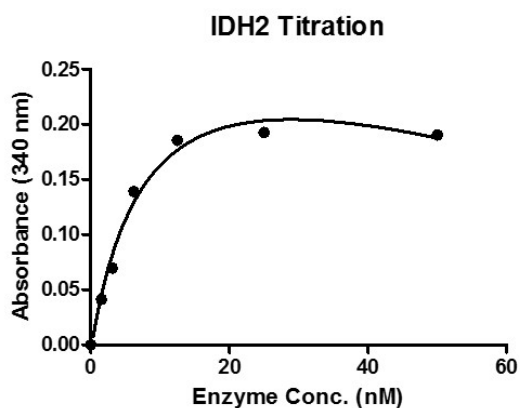


**Recombinant IDH2 protein, SDS-PAGE gel.**

Recombinant IDH2 protein was run on a 12.5% SDS-PAGE gel and stained with Coomassie Blue.

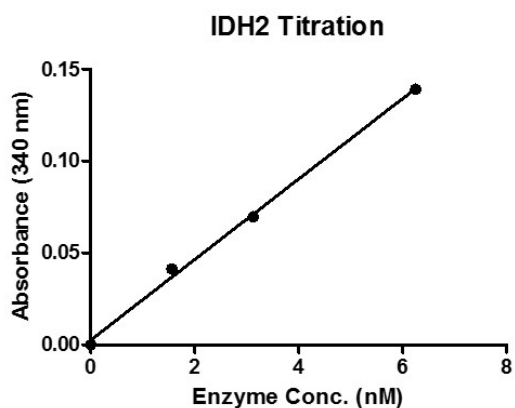
MW: 52.6 kDa

Purity: > 95%



**Recombinant IDH2 protein activity.**

200  $\mu$ M DL-isocitric acid trisodium and 200  $\mu$ M NADP<sup>+</sup> were incubated with IDH2 protein in reaction buffer including 50 mM Tris-HCl pH 7.4, 100 mM MgCl<sub>2</sub> for 10 minutes at room temperature. The generation of product NADPH was monitored by measuring absorbance at 340 nm.



**Recombinant IDH2 protein activity.**

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