



Clarity™ IDH2 Mutation Quantification Kit

Isocitrate dehydrogenase 2 (IDH2), a nicotinamide adenine dinucleotide phosphate (NADP)-dependent enzyme in mitochondria, is a critical component of the tricarboxylic acid cycle and involves in diverse cellular processes including histone demethylation and DNA modification. Two most frequently detected IDH2 mutations are G419A and G515A, which results in the R140Q and R172K amino acid substitutions respectively. These recurrent somatic mutations in the arginine residues promote tumorigenesis and cell proliferation, and have been identified in multiple malignancies such as acute myeloid leukemia, angioimmunoblastic lymphomas and glioma. Hence detection of the IDH2 R140Q and R172K mutations is clinically significant for tumour diagnosis, selection of targeted treatments and monitoring of disease prognosis. The Clarity™ IDH2 Mutation Quantification Kit provides ready-to-use reagents optimized for sensitive detection and quantification of IDH2 R140Q and R172K mutant from human plasma or serum using the Clarity™ digital PCR system (Cat. No. 10001).

Features



Reproducibility

Precise quantification of IDH2 R140Q and R172K mutation abundance



Ease of Use

Low hands-on-time, compatible with most conventional thermal cyclers



High Sensitivity

Detect as low as 0.1% of IDH2 R140Q and R172K mutant DNA



Manufactured in Singapore

Under ISO13485 certification



High Throughput Analysis

Analyze up to 96 reactions in 4 hours

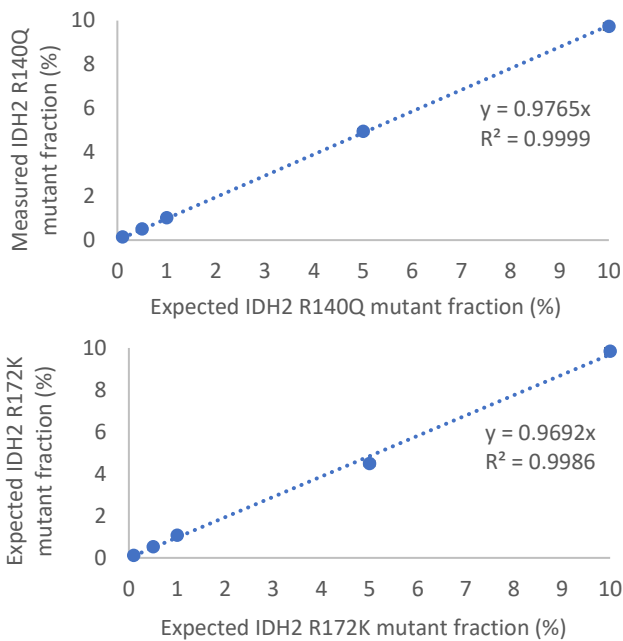


Figure 1. Plot of measured IDH2 R140Q or R172K mutant fraction against its expected mutant fraction using Clarity™ IDH2 Mutation Quantification Kit.

Product Performance

Clarity™ IDH2 Mutation quantification kit detected as low as 0.1% of IDH2 R140Q or R172K mutant DNA in a high background of 15,000 copies of wild-type IDH2. Data was plotted against the expected R140Q or R172K mutant fraction respectively, and both results showed excellent linearity from 10% down to 0.1% with an R^2 value > 0.999.

Product Specification

Technology	Digital PCR
Target Sequence	IDH2 wild-type and R140Q or R172K mutant DNA
Sensitivity (LOD)	0.1% mutation
Time to Result	< 4 h
Specimen Type	Human plasma or serum samples
Reporting Format	Ratio of mutant versus wild-type target
Instrument Tested	Clarity™ digital PCR system (Cat. No. 10001)
Additional Material Required	Clarity™ consumables package (Cat. No. 10011)
Detection Channels	FAM (R140Q or R172K mutant DNA), HEX (EGFR wild-type DNA)
Kit Storage	-20°C, avoid repeated freezing and thawing of kit contents

Ordering Information

Product Name	Description	Cat. No.
Clarity™ IDH2 Mutation Quantification Kit <i>For research use only</i>	48 Reactions	10021