

ARG83429 Pyruvate Carboxylase Assay Kit

Package: 96 wells
Store at: 4°C, -20°C

Summary

Product Description	ARG83429 Pyruvate Carboxylase Assay Kit can be used to measure Pyruvate Carboxylase in urine, serum, plasma, tissue extracts, cell lysate, cell culture media and other biological fluids.
Tested Reactivity	Other
Tested Application	FuncSt
Target Name	Pyruvate Carboxylase
Conjugation Note	Read at 340 nm
Sensitivity	0.001 µmol/ml
Sample Type	Urine, serum, plasma, tissue extracts, cell lysate, cell culture media and other biological fluids.
Standard Range	0.004 µmol/ml - 0.4 µmol/ml
Sample Volume	10 µl
Alternate Names	Pyruvate carboxylase; PC;

Properties

Form	96 well
Storage instruction	Store the kit at 4°C, -20°C. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Background	Pyruvate carboxylase was first discovered in 1959 at Case Western Reserve University by M. F. Utter and D. B. Keech. Since then it has been found in a wide variety of prokaryotes and eukaryotes including fungi, bacteria, plants, and animals. In mammals, PC plays a crucial role in gluconeogenesis and lipogenesis, in the biosynthesis of neurotransmitters, and in glucose-induced insulin secretion by pancreatic islets. Oxaloacetate produced by PC is an important intermediate, which is used in these biosynthetic pathways. In mammals, PC is expressed in a tissue-specific manner, with its activity found to be highest in the liver and kidney (gluconeogenic tissues), in adipose tissue and lactating mammary gland (lipogenic tissues), and in pancreatic islets. Activity is moderate in brain, heart and adrenal gland, and least in white blood cells and skin fibroblasts.
Function	Pyruvate carboxylase (PC) encoded by the gene PC is an enzyme (EC 6.4.1.1) of the ligase class that catalyzes the physiologically irreversible[citation needed] carboxylation of pyruvate to form oxaloacetate (OAA). It is an important anaplerotic reaction that creates oxaloacetate from pyruvate. The enzyme is a mitochondrial protein containing a biotin prosthetic group, requiring magnesium or manganese and acetyl-CoA.