CK-NAC

(Creatine Kinase - NAC)

Op. DGKC

Liquid, 2 Reagents — Store at 2℃ - 8℃

For in Vitro Diagnostic Use — Do not freeze

Cat. No.

A2140	CK-NAC	5X50ML
A2141	CK-NAC	5X25ML
A2142	CK-NAC	5X10ML

TEST PRINCIPLE

This is an optimized standard method according to the recommendations of the Deutsche Gesellschaft für Klinische Chemie.

Creatine phosphate + ADP $\xrightarrow{CK}$ > Creatine + ATP

ATP + Glucose $\xrightarrow{HK}$ > ADP + G-6-P

G-6-P + $NADP^+$ $\xrightarrow{G\text{-}6\text{-}P\text{-}DH}$ > 6-PG + NADPH + H^+

The coupled enzyme system is completely „down hill“, i.e., all reactions proceed in a favorable direction. The pH optimum for the system is 6.7.

REAGENTS PREPARATION

Working Reagents:

Substrate start:

Reagents are ready for use.

Sample start:

Mix 4 parts of Reagent 1 with 1 part of Reagent 2. For example: 4 ml Reagent 1 and 1 ml Reagent 2.

TEST PARAMETERS

Method:	UV, Kinetic, Increasing Reaction Optimized DGKC
Wavelength:	Hg 334 nm, Hg 365 nm, 340 nm
Temperature:	25℃, 30℃, 37℃
Sample:	Serum, EDTA-Plasma, heparinized Plasma
Linearity:	Up to 1000 U/L

REAGENTS STABILITY AND STORAGE

Store unopened and opened reagents at 2℃ - 8℃. Protect from light. Note expiration date on the label. Close immediately after use.Avoid contamination of the opened reagents.The working reagent is stable for 3 weeks at 2℃ - 8℃ and for 5 days at room temperature. Incompetent handling will release ARCHEM from any responsibility.

REAGENTS COMPOSITION

COMPONENTS	FINAL CONCENTRATION
Reagent 1 and Reagent 2	
Imidazole pH 6.7	100 mmol/L
Creatinephosphate	30 mmol/L
D-Glucose	20 mmol/L
N-Acetylcystein	20 mmol/L
Magnesiumacetate	10 mmol/L
EDTA	2 mmol/L
ADP	2 mmol/L
AMP	5 mmol/L
Diadenosinpentaphosphate	10 µmol/L
Glucose-6-Phosphate-DH >	1.5 kU/L
Hexokinase >	2.5 kU/L
NADP	2 mmol/L

TEST PROCEDURE

Bring reagent and sample to room temperature,30℃ o r 37℃.

Sample start

Pipette into test tubes	25℃, 30℃, 37℃
Working reagent for sample start	1 ml
Sample	40 µl

Mix. Read initial absorbance after 3minutes and start a timer. Read absorbance again after exactly 1, 2 and 3 minutes.

Determine ΔA/min. during the linear part of the assay.

CALCULATION

ΔA/min x factor = U/L CK-NAC in sample.

Factor for : 340 nm = 4127

LINEARITY

The assay is linear up approximately 1000 U/L. If Δ Absorbance/min is greater than 0.25 or 0.14 respectively, dilute the sample with physiological NaCl (150 mmol/L) and reassay multiplying the result by the dilution factor.

EXPECTED VALUES*

	25℃	30℃	37℃
Women	< 70 U/L	< 110 U/L	< 175 U/L
Men	< 80 U/L	< 130 U/L	< 200 U/L

* It is recommended that each laboratory establish its own normal range.

QUALITY CONTROL

All control sera with CK-NAC values determined by this method can be used.

We recommend:

"ARCON N“, Assayed Control Serum Normal

Cat.No. A3910

"ARCON P“, Assayed Control Serum Abnormal

Cat.No. A3920

CALIBRATION

The use of a CK - NAC Calibrator (for automated Systems) is optional. We recommend

ARCHEM Calibrator (" Arcal Auto ")

Cat. No. A39050

AUTOMATION

Special adaptations for automatic analyzers can be made on request.

REFERENCES

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2. **DGKC, J. Clin. Chem. Clin. Bioch. 15,** 255 (1977).
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