


 CUSTOMISED SOLUTIONS FOR YOUR LABORATORY		C1 Esterase Inhibitor			Instruction For Use		 	Rev.D - 15-11-22
		REF	R3330000035	R1: 1x 14.0 mL	R2: 1x 1.7 mL			
		A-R1100001901	R1: 1x 50.0 mL	R2: 1x 5.0 mL				

Intended Use

Quantitative determination of C1 Esterase Inhibitor (C1I) in human serum by turbidimetric immunoassay.

For professional in vitro diagnostic use only.

Diagnostics Implications

C1INH is an α 2-globulin that controls the first stage of the classical complement pathway and also inhibits plasmin, thrombin and kallikrein.

C1INH is very important in the diagnosis of hereditary angioneurotic oedema; a disease characterised by subcutaneous, bronchial and gastrointestinal oedema. Laboratory findings include low levels of C4 and C1INH, but normal levels of C3. In about 15% of the cases, levels of C1 esterase inhibitor are normal, but the protein is non-functional. In such cases, a functional assay for the inhibitor is essential to diagnosis.

Method

Measurement of antigen-antibody reaction by the end-point method.

Reagents Provided

The same reagents are supplied in different volume formats depending on the I.S.E. S.r.l. analysers utilised and installed reagent support.

Supplied Volumes

	Product Code	
	R3330000035	A-R1100001901
Vial size	18 / 18 mL	50 / 20 mL
Reagent 1	1 x 14.0 mL	1x 50.0 mL
Reagent 2	1x 1.7 mL	1x 5.0 mL

Reagent format

Reagent	Format	Code
Reagent 1 – Buffer (liquid)	Ready to Use	
Reagent 2 – Antiserum (liquid)	Ready to Use	

Reagent Contents

Reagent 1:	Conc.	U.M.
Phosphate buffered saline (pH 7.43)	-	-
Polyethylene glycol	60	g/L
Sodium azide	0.95	g/L
Reagent 2:		
Phosphate buffered saline (pH 7.43)	-	-
Polyclonal goat anti-human C1 esterase inhibitor	Variable	-
Sodium azide	0.95	g/L

Stability and Storage

The reagents are stable until expiry date when kept at 2-8°C. Stability in the instrument is at least 4 weeks if contamination is avoided. Do not freeze.

Reagents required but not supplied

- Saline (9 g/L NaCl)
- Calibrators and Controls

Key Reference	Description
R1300002501	Protein Calibrator High, 1 mL
R1400000901	Immunology Control Low, 1 mL
R1400001001	Immunology Control High, 1 mL

Pooled human serum, liquid and stabilized. Contains 0.95 g/L sodium azide. Values are stated in the insert.

Sample collection and storage

Use fresh serum. If the test cannot be carried out on the same day, the serum may be stored at 2 – 8°C for 48 hours. If stored for a longer period, the sample should be frozen.

General Assay Procedure

Application sheets are available upon request for use with I.S.E. S.r.l. automated systems. All applications not explicitly approved by I.S.E. S.r.l. cannot be guaranteed in terms of performance and must therefore be established by the operator.

Wavelength λ =340nm.

Sample/Control/Standard: dilute 1:2 in saline 9g/L.

Reference curve: generate a reference curve by diluting the standard high level Ref. R1300002501 1:1, 1:2, 1:4, 1:8, 1:16 in saline 9 g/L. Use saline 9 g/L as zero point.

Quality control

It is necessary, each time the kit is used, to perform the quality controls and to check that values obtained are within the acceptance range provided in the insert. Each laboratory

should establish its own mean and standard deviation and adopt a quality control program to monitor laboratory testing.

If erratic results occur, please contact an authorised ISE representative.

Normal Ranges

23 – 41 mg/dL.

Reference values are considered indicative since each laboratory should establish reference ranges for its own patient population. The analytical results should be evaluated with other information coming from patient's clinical history.

Performances

The performance characteristics for the C1 Esterase Inhibitor reagents were measured on a clinical chemistry analyzer.

Measuring range:	0 - 90 mg/dL
Detection Limit:	1.6 mg/dL
Hookeffect:	No risk
Sensitivity:	0.0016 ABS units/concentration unit

Precision of the method

Condition	U.M.	Low	Medium	High
Intra-Run	CV%	3.81	1.91	2.81
Inter-Run	CV%	9.21	1.92	4.00

Accuracy of the method

Control	U.M.	Assigned	Measured
Aptec	mg/dL	28.4 (24.1-32.7)	26.9
Behring	mg/dL	24.0 (20.4-27.6)	24.3

Specificity:	Monospecific.
Limitations:	None
Comparison with Nephelometry:	$y = 1.1397x - 10.265$ $r = 0.9946$
Stability at 4°C:	at least 3 years after production

Precautions and Warnings

- In vitro diagnostic use only.
- Refer to the safety data sheets (SDS) and take the necessary precautions for the use of laboratory reagents.
- Do not use after expiry date and do not interchange reagents from different lots.
- Replace caps on reagents immediately after use. Do not switch caps.
- Do not pipet by mouth. Do not smoke, eat, drink or use cosmetics during the use of the reagent. Do not swallow.
- Sodium azide has been reported to form lead or copper azide in laboratory plumbing which may explode on percussion. Flush drains with water thoroughly after disposing of fluids containing sodium azide.
- Polyethylene glycol is non biohazardous.
- Each donor unit used in the preparation of the reagents, standards and controls was found to be negative for the presence of HIV1 and HIV2 antibodies, as well as for the hepatitis B surface antigen and anti-hepatitis C antibodies, using a method approved by the FDA. However, the material must be considered potentially hazardous and handled with the same care as samples taken from patients.
- Cuts, abrasions, and other skin lesions should be properly protected with an appropriate waterproof dressing.
- Take care to avoid self-inoculation, splashing of mucous membranes or generation of aerosols. Laboratory gloves should be worn while handling patients' samples or disposing of solid or liquid wastes.
- In addition to the eventual risk indications regarding the active components, the reagents contain inactive components such as preservatives (e.g. sodium azide or others) and detergents. The total concentrations of these components are lower than the limits reported by the current directive and following modification and amendments. However, it is recommended to handle reagents carefully, to avoid ingestion and contact with eyes, skin and mucus membranes and to use laboratory reagents according to good laboratory practice.
- All human samples must be handled and disposed of as potentially infectious materials.









Disposal of reagent

Disposal of reagents must be performed in accordance with the EC regulations regarding waste, or the local national or regional legislation.









Reporting of serious incidents

The user must report (through the distributor) any serious accident occurring in relation to the device to both the manufacturer and the competent authority of the European Union Member State in which the user and / or patient is established. For other jurisdictions, reports of serious incidents must be produced in accordance with regulatory requirements.



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Symbols on labels and packaging

	In vitro diagnostic medical device
	Catalog Number
	Lot number
	Manufacturer
	Expiry date
	Temperature limitation
	Consult Instructions for use
	Reagent "n"

References

1. Shapira, M. et al., Complement 2, 111 (1985)
2. Thomas, L. (Hrsg.), Labor und Diagnose, Die Medizinische Verlagsgesellschaft, Marburg 1992
3. Rozen, F. S. et al., Science 148, 957 (1965)
4. Starcevic, d. et al., Ann. Clin. Biochem. 28, 595 (1991)

Revision history		
Rev.D	15-11-2022	Revision of the document

