

Erba LA1 Screen

Lupus Anticoagulants (LA)



Cat. No.:	Pack name:	Packaging (Content):
EHL00037	Erba LA1 Screen	10 x 2 ml

EN



INTENDED USE

Erba LA1 Screen is intended for the qualitative determination of LA (Lupus Anticoagulants) in human plasma.

CLINICAL SIGNIFICANCE

Lupus Anticoagulants (LA) are antibodies of the IgG and IgM type which are directed against a variety of anionic phospholipids. The presence of LA in plasma is increasingly associated with a variety of haemostatic problems such as recurrent foetal loss, thrombocytopenia, unexplained thrombosis and neurological disorders. LA prolongs phospholipid dependant *in vitro* clotting assays such as the activated partial thromboplastin time (APTT).

Russell's Viper venom directly activates Factor X to Factor Xa in the presence of phospholipid and calcium, leading to detectable clot formation in plasma. Erba LA1 Screen kit is more sensitive for LA than the APTT. Erba LA1 Screen kit is intended to be used in conjunction with the Erba LA2 Confirm kit (Cat. No.: EHL00038).

PRINCIPLE

Clotting test.

COMPOSITION

Erba LA1 Screen contains a proprietary mixture of Russell's Viper venom co-lyophilised with calcium chloride and phospholipid

WARNINGS AND PRECAUTIONS

- For *in vitro* diagnostic use only. These reagents are to be used by certified medical laboratory personnel only.
- Do not ingest.
- Wear gloves when handling all kit components.
- Only use clean or single use laboratory equipment to avoid contaminations.
- The eventual rest of reagents should be disposed of in accordance with the internal regulations and in compliance with local and national regulations relating to the safe handling of waste.

WORKING REAGENT

Reconstitute each vial of Erba LA1 Screen with 2 ml of distilled or deionised water. Allow to stand for 10 minutes and mix well before use. Do not shake.

STABILITY AND STORAGE

The unopened reagents are stable till the expiry date stated on the bottle and kit label when stored at 2–8°C.

Reconstituted vials are stable:

- 24 hours at 15–30°C
- 5 days at 2–8°C
- 2 weeks at -20°C

The reagent should be frozen in plastic test tubes and thawed at 37°C before use.

REAGENTS REQUIRED BUT NOT PROVIDED

Erba LA2 Confirm (Cat.No.: EHL00038)
Erba Control N (Cat.No.: EHL00014)
Erba LA Control High (Cat.No.: EHL00039)

SAMPLE COLLECTION AND PREPARATION

Plastic or siliconised glass should be used throughout.
Blood (9 parts) should be collected into 3.2 % or 3.8 % sodium citrate anticoagulant (1 part). Separate plasma after centrifugation at 1500 x g for 15 minutes.
Plasma should be kept between 2–8°C or 18–24°C. Testing should be completed within 4 hours of sample collection, or plasma can be stored frozen at -20°C for 2 weeks or -70°C for 6 months. Thaw quickly at 37°C prior to testing. Do not keep at 37°C for more than 5 minutes.¹ If freezing, double centrifugation of the sample is recommended to ensure that the sample is platelet poor. Transfer the plasma following the initial centrifugation to a non-activating plastic tube using a plastic pipette, then re-centrifuge the plasma for an additional 10 minutes at a higher speed (>2500 x g). When aliquoting to a secondary tube, take care to not include the residual platelets that may have collected at the bottom of the centrifuge tube.²

PROCEDURE

Manual method

- Pre-warm sufficient reconstituted reagent to 37°C.
- Pipette 0.2 ml of patient or control plasma into a reaction tube. Incubate at 37°C for 2 minutes.
- Add 0.2 ml of pre-warmed Erba LA1 Screen Reagent and start a timer.
- Measure the clot formation time to the nearest 0.1 seconds.
- Calculate the normalised 'Erba LA1

Screen' ratio as. clotting time of the patient sample / mean value of the clotting time

Automated method

Refer to the instrument's operator's manual.

INTERPRETATION OF RESULTS

Results are best expressed as a normalised ratio relative to the mean normal clot time obtained by each laboratory. It is recommended that like for like sample types are used when calculating a normalised ratio. Both Erba LA1 Screen and Erba LA2 Confirm results can be 'normalised' in this way, reducing the effect of instrument variability and potentially improving discrimination between weak positive LA and normal samples. Results of the mixing tests can be treated in the same way.

If the clot time of the patient sample is greater than 3 standard deviations above the mean of the normal range, a lupus anticoagulant may be present. In this case, the plasma should be re-tested after mixing 1:1 with Erba Control N (Cat. No.: EHL00014) as well as testing with the Erba LA2 Confirm kit (Cat. No.: EHL00038). If the Erba LA1 Screen clotting time of the patient plasma mixed 1:1 with Erba Control N is still greater than 3 standard deviations above the mean of the normal range, a lupus anticoagulant may be present. If the Erba LA1 Screen clotting time of the patient plasma mixed 1:1 with Erba Control N is corrected to within the normal range, a factor deficiency (II, V or X) is most likely.

The Scientific and Standardisation Sub-Committee for the Standardisation of Lupus Anticoagulants of the International Society of Thrombosis and Haemostasis has recommended that the diagnosis of lupus anticoagulant be made when the DRVVT of a test plasma mixed with normal plasma is greater than 3 standard deviations from the mean normal (non-LA) plasma DRVVT time.

The use of the DRVVT Confirm kit allows discrimination between LA, factor deficiency and other inhibitors.

REFERENCES VALUES

Reference values can vary between laboratories depending on the techniques and systems in use. For this reason each laboratory should establish its own reference ranges. The normal reference range (mean ± 3SDs) determined by Erba LA1 Screen test was 33.7 ± 8.1 seconds (range 25.6–41.8 seconds).

QUALITY CONTROL

Each laboratory should establish a quality control program. Normal and abnormal control plasmas should be tested prior to each batch of patient samples, to ensure satisfactory instrument and operator performance. If controls do not perform as expected, patient results should be considered invalid.

For quality control Erba Control N, Cat.No.: EHL00014, and Erba LA Control High, Cat.No.: EHL00039, are recommended.

LIMITATIONS

Plasma deficiencies of Factors II, V or X may lead to abnormal results in neat plasma. Mixing studies should correct this.

Plasma from patients with the following may give abnormal results when the plasma is tested neat, and these samples may not correct in mixing studies: heparin (>1 U/ml), oral anticoagulants, disseminated intravascular coagulation (DIC).

Care must be taken to remove residual platelets from plasma by filtration or centrifugation, as platelet derived phospholipid can interfere with the test.

INTERFERENCES

Not observed significant interferences

PERFORMANCES

Within run and between run CVs are expected to be < 5 %.

REFERENCES

- Clinical and Laboratory Standards Institute (2008) Collection, Transport and Processing of Blood Specimens for Testing Plasma-Based Coagulation Assays and Molecular Haemostasis Assays: Approved Guideline, 5th edn. CLSI: H21-A5
- Pengo V et al (2009) Update of the guidelines for lupus anticoagulant detection, J Thromb Haemost, 7: 1737-40

USED SYMBOLS

LOT	Lot Number	IVD	In vitro Diagnostics		See Instruction for Use
REF	Catalogue Number		Manufacturer		Content
	Expiry Date		Storage Temperature		

QUALITY SYSTEM CERTIFIED
ISO 13485

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