IMTEC-Annexin V-Antibodies Screen

Annexin V Screen
ELISA for the Quantitative Determination of Anti-Annexin V Antibodies (Ig(GAM))

Package Size

REF	ITC59550	96 Tests	Complete Testkit
IVD			

Please read the instructions carefully before testing.

Procedural precautions:

Do not use the reagents beyond the date of expiry.

DIL DB03, WASH 20x WB06, SUB TMB ELISA and STOP STOP ELISA may be interchanged between lots and test kits that share the same reagent designation.

All other reagents are specific for the individual test kit lot and must not be interchanged with other lots and test kits

Store reagents at 2...8°C.

Intended Use

IMTEC-Annexin V-Antibodies Screen is an indirect solid-phase enzyme immunoassay (ELISA) for the quantitative measurement of IgG, IgM and IgA class autoantibodies against annexin V in human serum or plasma. The assay is intended for in vitro diagnostic use only as an aid in the diagnosis of immune-mediated pregnancy complications.

Annexin V is an effective and potent anticoagulant protein. Inhibition of its function can be achieved either through autoantibodies to the protein alone or autoantibodies to a complex of (anionic) phospholipids and annexin V (cofactor). Anti-annexin V antibodies have been primarily described in women with a history of recurrent fetal loss, intra uterine death and premature delivery (e.g. APS). These antibodies have also been detected in women with a history of recurrent miscarriage and no signs of thromboembolic complications.

Indications:

- risk assessment of prenatal complications in the context of APS and SLE
- cases of recurrent fetal loss of unclear etiology.

Principle

The test is based on the immobilisation of annexin V to the solid phase of microtiter strips and subsequent binding of anti-annexin V antibodies from patient serum. The bound antibodies are detected with peroxidase-labelled secondary antibodies that are directed against human IgG, IgM and IgA. After addition of substrate solution, a colour appears which intensity is proportional to the concentration and/or the avidity of the detected antibodies. Following the addition of stop solution, the colour switches from blue to yellow.

Reagents and Contents

MTP	12	**Microtiter Strips** (in 1 strip holder) 8-well snap-off strips, ready for use coated with annexin V
CAL	1 – 5 5 x 1.5 ml	**Calibrators** (white cap), human serum, inked according to concentration, ready for use anti-annexin V level: 6.25 U/ml **(1)**, 12.5 U/ml **(2)**, 25 U/ml **(3)**, 50 U/ml **(4)**, 100 U/ml **(5)**
NC	1.5 ml	**Negative Control Serum** (green cap), human, ready for use
PC	1.5 ml	**Positive Control Serum** (red cap), human, ready for use Concentrations are stated on the labels.
WASH 20x WB06	50 ml	**Washing Buffer** (black cap) Concentrate (20x) for 1 l TRIS buffer
DIL DB03	100 ml	**Dilution Buffer** (blue cap) ready for use Phosphate buffer
CON	15 ml	**Conjugate Solution IgGAM** (white cap) anti-human-IgGAM HRP conjugate, ready for use
SUB TMB ELISA	15 ml	**TMB solution** (black cap) ready for use, colourless to bluish 3,3', 5,5'-tetramethylbenzidin 1.2 mmol/l Hydrogen peroxide 3 mmol/l
STOP STOP ELISA	15 ml	**Stop Solution** (red cap) Sulphuric acid, ready for use 0.5 mol/l
	1	**Adhesive Strip**

Safety Notes

Do not swallow the reagents. Avoid contact with eyes, skin and mucous membranes. All patient specimens and controls should be handled as potentially infectious. The controls have been checked on donor level for HCV and HIV-1/2 antibodies and HBsAg and found negative. Wear protective clothing and disposable gloves according to Good Laboratory Practices.

All materials contaminated with patient specimens or controls should be inactivated by validated procedures (autoclaving or chemical treatment) in accordance with applicable regulations.

STOP, SUB can irritate eyes, skin and mucous membranes. Upon contact, rinse thoroughly with copious amounts of water and consult a doctor.

Stability

The reagents are stable up to the stated expiry dates on the individual labels when stored at 2...8°C.

Reagent Preparation

Allow the testkit and all its components to reach room temperature before use! Used bottles should be closed carefully and stored at 2...8°C. Store SUB protected from light.

Do not use polystyrene vessels for handling of CON.

To avoid potential microbial and/or chemical contamination, unused reagents should never be transferred into the original vials.

Washing Buffer Solution WASH

Any crystallised salt inside the bottle must be resolved before use. Dilute 1 part WASH 20x with 19 parts distilled water. WASH is stable for 6 weeks stored at 2...8°C.

Specimen

Patient sera or plasma

Use samples freshly collected or freeze samples at –20°C. **Freeze and thaw once only**. Do not use serum samples inactivated by heat treatment at 56°C.

Allow the samples to reach room temperature (30 min.).

Dilute samples 1:101 with DIL (add 10 µl sample to 1 ml DIL).

Procedure

- **Pipette 100 µl** diluted sample, CAL, PC and NC into MTP, for blank use DIL instead of sample dilution, seal MTP with adhesive strip.
- Incubate for **1 hour** at RT.
- Discard the solution from MTP. Wash MTP 3 times using 300 µl WASH per well.
- Discard WASH and knock out residues on an absorbent paper or cloth.
- **Pipette 100 µl** CON and seal MTP with adhesive strip.
- Incubate for **30 min.** at RT.
- Discard the solution from MTP. Wash MTP 3 times using 300 µl WASH per well.
- Discard WASH and knock out residues on an absorbent paper or cloth.
- **Pipette 100 µl** SUB and incubate for **10 min.**. At room temperatures above 25°C the substrate incubation could be shortened, but should never fall short of 5 min..
- **Add 100 µl** STOP per well.
- **Read absorbance values at 450 nm** within the next 10 min. after stopping. Bi-chromatic measurement with a reference wavelength at 620 – 690 nm is recommended.

Automation

The IMTEC-Annexin V-Antibodies Screen ELISA may be processed with suitable automated ELISA analyzers. Applications have to be validated prior to diagnostic use.

Validation of the test

The test results are valid provided the following criteria are met for the obtained results:

- PC is within the indicated range (see label).
- NC is lower than the cut-off-value of the test.
- CAL 5 does not fall below an absorbance value of 0.6.
- The absorbances of CAL 1-5 keep raising.

In order to improve accuracy of the test results we recommend to run CAL 1-5, PC, NC and patient samples in duplicate.

Interpretation of Results

Plot measured absorbencies against U/ml of CAL 1-5 in semi-log. By interpolating the plotted measuring points, a calibration curve is obtained, from which the concentrations of anti-annexin V antibodies in the patient samples can be determined.

Results above 25 U/ml are positive.

Limitations

A positive result must be used in association with clinical evaluation and diagnostic procedures. The values obtained from this assay are intended to be an aid for diagnosis only.

Elevated anti-annexin V antibodies may occur in individuals with no evidence of clinical disease.

If the patient sample contains elevated levels of immune complexes or other immunoglobulin aggregates, false positive results by non-specific binding cannot be ruled out.

Performance characteristics

Typical performance data can be found in the Verification Report, accessible via:

www.human.de/data/gb/vr/el-59550.pdf or

www.human-de.com/data/gb/vr/el-59550.pdf

References

1. Rand J.H., Wu X.-X., The Annexins: A Target of Antiphospholipid Antibodies in The Antiphospholipid Syndrome II: Autoimmune Thrombosis. Asherson R.A. *et al.* (eds). Elsevier Science BV Amsterdam, Lausanne, New York, Oxford, Shannon, Singapore, Tokyo, 71-77 (2002)
2. Bertolaccini M.L. *et al.*, Clin. Lab. **50**, 653-665 (2004)

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