SEROCON®

STAINED SALMONELLA ANTIGEN SET WITH POSITIVE AND NEGATIVE CONTROL

BEACON

Code	Product Name	Pack Size
SE053A	Stained Salmonella Antigen set With Positive and negative control	4x5 ml
SE053B	Stained Salmonella Antigen set With Positive and negative control	2+2x5 ml
SE053C	Stained Salmonella Antigen set With Positive and negative control	2x5 ml

Intended Use

This diagnostic reagent kit is used for detection of specific antibodies produced in response to the stimulation by specific Antigen of Salmonella (group).

Principle

The Killed bacterial suspension of Salmonella carries specific 'O' and 'H' antigen. This will react with immunospecific antibodies which may be present in patient serum and agglutinate the antigen to produce agglutination or clumps on the slide.

Clinical Significance

The organism Salmonella typhosa is responsible for causing enteric fever or typhoid fever , which is characterized generally by very high consistent fever, loss of appetite, transitory bacteraemia, round or oval shaped ulcer on smooth peritoneal surface of Peyer's patches and solitary lymphoid follicle of ileum etc. The organism possess 'O' antigen on the cell wall and 'H' antigen on it's flagella, against which the host body produces immunospecific antibodies, to counteract the effect of corresponding antigens. On the other hand the paratyphoid fever caused by Salmonella paratyphi A or Salmonella paratyphi B is characterized by milder course of disease. These organisms also possess somatic 'O' and flagella antigen which is termed as A(H) and B(H) respectively. The Other Organisms of Salmonella species like Salmonella typhimurium is responsible for causing food poisoning or Arizona group causing fetal infection do have similar antigenic properties.

Contents

Reagent 1: Salmonella Typhi O Antigen

Reagent 2 : Salmonella Typhi H Antigen

Reagent 3 : Salmonella Paratyphi A(H) Antigen

Reagent 4 : Salmonella Paratyphi B(H) Antigen

Reagent 5 : positive control

Reagent 6 : negative control

Sample

Fresh serum sample is preferred. In case of any delay the sample should be stored at +2-+8°C away from direct light.

However the test is to be performed within 24 hrs. of collection of sample.

Stability And Storage

All reagents are stable till expiry date mentioned on the label when stored at +2 -+ 8°C away from direct light

Procedures

A. Rapid Slide Test (Widal Screening Test):

1. Clean the glass slide provided in the kit and wipe .
2. Place one drop of undiluted serum to be tested in each of the first four circles (1-4).
3. Add one drop of antigen O, H, A(H) and B(H) in circles 1, 2, 3,4 respectively.
4. Mix the contents of each circle with separate stick and Spread to fill the entire circle area.
5. Rock the slide for one minute and observe for Agglutination.
6. If agglutination is visible within one minute then proceed for quantitative estimation.

B. Quantitative Slide Test:

Clean the glass slide supplied in the kit and proceed as follows.

Circle	Serum volume	Appropriate Antigen Drop		Titre
1	0.08 ml	1 Drop	Mix and	1:20
2	0.04 ml	1 Drop	Rotate for	1:40
3	0.02 ml	1 Drop	One minute	1:80
4	0.01 ml	1 Drop	End observe	1:160
5	0.005 ml	1 Drop	Agglutination	1:320

Repeat the above procedure for visible agglutination.

Titre is the highest dilution observed in rapid slide screening test which gives visible agglutiriation.

C. Tube Agglutination Method

1. Prepare a row of tube test for each sample as follows:

Dilutions	1/20	1/40	1/80	1/160	1/320	1/640	---
Sample(µL)	100	---	---	---	---	---	---
NaCL 9 g/L (mL)	1.9	1	1	1	1	1	---
	1 mL →	1 mL →	1 mL →	1 mL →	1 mL →	1 mL →	1 mL Discard

2. Prepare 2 tubes for Positive and Negative control: 0.1 mL Control + 0.9 mL NaCl 9 g/L.
3. Add a drop (50µL) of antigen suspension to each tube.
4. Mix thoroughly and incubate tube test at +37°C for 24 h.

Interpretation of result

A. Rapid Slide Test:

Granular agglutination in case of 'O' and flocculating agglutination in case of H or A(H), or B(H) indicates positive reaction.

B. Quantitative Slide Test:

A diagnostic titre of 1:80 suggests positive reaction.

C. Tube Agglutination test :

Examine macroscopically the pattern of agglutination and compare the results with those given by all control tubes. Positive control should give partial or complete agglutination. Negative Control should not give visible clumping. Partial or complete agglutination with variable degree of clearing of the supernatant fluid is recorded as a positive. The serum titer is defined as the highest dilution showing a positive result.

Limitations

Rapid slide tests or quantitative slide tests are non-specific type of test. The positive result should be further confirmed by tube test and other microbiological investigations.

To Remember

1. Bring all the reagents and samples to room temperature before use.
2. Serum should not be inactivated.
3. Use clean and dry glassware.
4. Include positive and negative control sera (normal saline) for greater proficiency in interpretation of results.
5. Shake antigen vial well before use.
6. Test serum should be clear.
7. Avoid performing the test directly under the fan.
8. Before giving the final result, patient history should be taken into consideration.
9. In non vaccinated persons the titre as high as 1:80 between 7th or 10th day of fever is of diagnostic value and the same titre increases gradually during subsequent period.
10. In vaccinated persons the question of anamnestic response should always be borne in mind and 'H' titre should not be taken into account for the purpose of diagnosis unless there is a rising titre of 'H' in subsequent period.
11. Care should be taken to empty the dropper after use in order to avoid the possibilities of false positive results.

References

1. Felix A. (1942) Brit Med. Jr. 11,597
2. Protell R.I. et. al. (1971) Lancet, 11, 330
3. Medical Bacteriology. N. C. Dey (1970) 259 - 284

Symbols Used On Labels

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

BEA/24/WPN/SE/IFU Ver -03
17/06/2025