

Yersinia pseudotuberculosis Antisera “SEIKEN”

These sera are antisera used for grouping tests of *Yersinia pseudotuberculosis* and are liquid products which contain group-specific agglutinins.

When these products are used, the group is identified by slide agglutination.

Healthy rabbits are hyper immunized with the culture suspension of each group strain (1 – 6) and after bleeding the sera are heated at 56°C for 30 minutes and absorbed to remove cross-agglutinins. They are then sterilized by anti-bacterial filtration and sodium azide is added at 0.1 w/v% as a preservative.

PRODUCTS

Set: 6 vials, Group 1 – 6

INTENDED USE

Determination of *Yersinia pseudotuberculosis* sero-group

PRINCIPLE OF MEASUREMENT

This product is mixed with *Yersinia pseudotuberculosis* to cause an antigen-antibody reaction and forms an aggregate of the bacteria observable macroscopically. Serological grouping is performed using this principle.

PROCEDURES

If the cultural and biochemical features of the isolate taken from materials for examinations are consistent with *Y. pseudotuberculosis*, further serological tests should then be performed to determine the sero-grouping according to the following procedures.

Test Method

1. The isolate of the test organism is incubated on agar slant at 25°C for 24–48 hours.
2. Using a glass pencil, divide a clean glass slide into several parts, put a drop of sera (Group 1 – 6) in the center of each part and put a drop of physiological saline in the center of the control part.
3. Put one loopful of the antigenic suspension in the vicinity of the drop of serum or physiological saline and mix the antigen and serum or antigen and physiological saline well using a platinum loop.
4. After tilting the glass slide back and forth, observe whether agglutination occurs with the naked eye. In addition, as a control, check whether spontaneous agglutination occurs with the reaction of antigen and physiological saline.

READING

The results are read as follows.

Physiological saline-antigen solution reaction	Antiserum-antigen solution reaction	Judgment
Spontaneous agglutination (–)	Strong agglutination within 1 minute	Positive (+)
	No agglutination within 1 minute	Negative (–)
Spontaneous agglutination (+)	Reservation of judgment	

1. Slight agglutination occurring later than one minute after the reaction between antiserum and antibody should be regarded as negative.
2. If positive agglutination is observed, the isolate possesses the specific antigen group.
3. If agglutination is observed in the physiological saline control, the test should be repeated selecting another colony.

PERFORMANCE CHARACTERISTICS

1. Sensitivity

When one drop of this antiserum is allowed to react on a slide with a known serotype of the standard strain provided by the National Institute of Health Japan, macroscopically granular agglutination is observed.

2. Specificity

In a test made in a similar manner to the sensitivity test, this antiserum agglutinates with only the standard strain corresponding to the serotype, while in the reaction with non-corresponding standard strains, macroscopic agglutination is not observed.

PRECAUTIONS

1. Live cells and instruments such as slides and test tubes used for the tests should be disposed of after soaking in 0.1% sodium hypochlorite solution (available chlorine approximately 1000 ppm) for 1 hour or more, or after autoclaving at 121°C for 20 minutes or more.
2. Freezing of sera may sometimes produce a precipitate after thawing.
3. As this reagent contains sodium azide, it may react with lead or copper to form explosive heavy metal azides. Discard it along with a large quantity of water.

STORAGE AND EXPIRATION

Store the reagent at 2–10°C, up to expiration date on the label.

PACKAGE

2 ml in each vial with a pipette
Set: 6 vials