

MAST® ASSURE ANTISERA TOXIGENIC *E. COLI* PILI

Intended purpose

Liquid stable antisera for the serotyping of *Escherichia coli* pili antigens.

PLEASE NOTE

This product does not bear the CE mark indicating compliance with European in vitro diagnostic medical device regulations.

Both in Europe and the rest of the world this product is only for veterinary or research purposes only.

All users must sign a declaration that they will not use this product for diagnostic purposes on samples of human origin.

Contents: See pack label.

Formulation

MAST® ASSURE ANTISERA are prepared from rabbits hyperimmunised with standard strains of killed organisms possessing known serotypes or group specific antigens and contain 0.085% sodium azide as preservative.

Stability and storage

Store unopened at 2 to 8°C until the expiry date shown on the pack label. Once opened, MAST® ASSURE ANTISERA should be stored at 2 to 8°C and may be used until the expiry date given on the label. **Do not freeze reagents.**

Warnings and precautions

For *in vitro* diagnostic use only. Observe approved biohazard precautions and aseptic techniques. To be used only by adequately trained and qualified laboratory personnel. Sterilise all biohazard waste before disposal. Sodium azide preservative may be toxic if ingested and may react with lead and copper plumbing to form highly explosive salts. Always dispose of by flushing to drain with plenty of water. Refer to Product Safety Data sheet.

Materials required but not provided

Standard microbiological supplies and equipment such as loops, applicator sticks, clean glass microscope slides or glass test tubes, swabs, MAST® culture media, and incubators, etc., as well as reagents and additives such as sterile 0.85% saline solution and Minca Medium.

Formulation of Minca Medium pH 7.5		* Formulation of mineral solution	
KH ₂ PO ₄ anhydrous	1.36g	MgSO ₄ .7H ₂ O	10.0g
Na ₂ HPO ₄ .2H ₂ O	10.1g	MnCl ₂ .4H ₂ O	1.0g
Glucose	1.0g	FeCl ₂ .6H ₂ O	0.135g
Yeast extract	1.5g	CaCl ₂ .2H ₂ O	0.4g
Agar	12.0g	Deionised water	1L
Acid casein hydrolysate	1.0g		
Mineral solution *	1ml		
Deionised water	1L		

Procedure

Slide agglutination of live organisms

1. Dispense two 5 to 10 µl volumes of sterile 0.85% saline solution (saline) onto a carefully cleaned microscope slide. The slide may be partitioned using a chinagraph pencil. With a platinum wire or disposable inoculation loop take one 1 to 2mm colony of live organisms from a fresh culture on Minca Medium or similar and emulsify into each drop of saline to produce a distinct and uniform turbidity.

Note: Addition of a vitamin supplement e.g. MAST® GC Growth Supplement Selectavial (SV16) to the Minca Medium will produce stronger reactions as it helps to promote growth of pili antigens.

Selection of colonies from the medium is important as strains possessing 987P antigen also produce non-piliated colonies on Minca Medium. If the 987P antigen is identified, the substitution of acid casein hydrolysate in the Minca medium with 2 g/l of ammonium sulphate will give stronger reactions.

2. Place a drop (30 to 40µl) of antiserum onto one of the emulsified isolates and on to the other a drop (30 to 40µl) of saline as a control.

Note: Do not allow the organism to contaminate the antiserum dropper bottle.
3. Mix the reagents by tilting the slide back and forth for 60 seconds while viewing it under indirect light against a dark background.
4. Distinct clumping or agglutination within this period, without clumping in the saline control (auto-agglutination), should be regarded as a positive result. Weak agglutination should be recorded as negative.

Interpretation of results

Isolates producing a distinct positive reaction with an antiserum are assumed to be *Escherichia coli* exhibiting the pili antigens specified by the antiserum producing the reaction.

Limitations of use

Only cultures of organisms identified as toxigenic *Escherichia coli* by morphological and biochemical features should be serotyped with this product. The antisera are intended for use in rapid slide agglutination tests only. Adhesive pili antigens of human origin from toxigenic *E. coli* do not show any agglutination with these reagents.

Quality control

It is recommended that quality control should be performed with at least one organism to demonstrate a positive reaction and at least one organism to demonstrate a negative reaction. Do not use the product if the reactions with the control organisms are incorrect. Check for signs of deterioration. Do not use reagents if they are contaminated or cloudy.

References

Bibliography available on request.