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MAST ASSURE™ SALMONELLA ANTISERA

Liquid stable antisera for the determination of O, H and Vi antigens for the serological identification of salmonellae.

FOR IN VITRO DIAGNOSTIC USE ONLY

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, incinerators and incubators, etc., as well as reagents and additives such as sterile 0.85% saline solution.

Procedure
Slide agglutination of live organisms
1. Dispense two 5 to 10µl 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 MAST Nutrient Agar DM179 or similar and emulsify into each drop of saline to produce a distinct and uniform turbidity.
2. Place a drop (30 to 40 µl) of antiserum onto one of the emulsified isolates and on to the other a drop (30 to 40 µl) 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 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.

Slide agglutination of heat treated organisms
If no agglutination is found with any of the polyvalent O sera, repeat the above procedure using the Vi antiserum. If a positive agglutination is found with the Vi antiserum, prepare a dense cell suspension of the organism in saline and heat it to 100°C for 60 minutes or autoclave at 121°C for 15 minutes. Repeat the slide agglutination tests as described above with polyvalent O and Vi antisera. The Vi antiserum should now give a negative result and the O antigens should be revealed.

Interpretation of results
Isolates producing a distinct positive reaction with a polyvalent antiserum are assumed to be *Salmonella* from the groups (O or H) represented by the antiserum. Further testing of the isolate should be conducted as described in steps 1 to 3, with monovalent antisera.

Limitations of use
Only cultures of organisms identified as *Salmonella* by morphological and biochemical features should be serotyped with this product.
Polyvalent antisera are intended for use in rapid slide agglutination tests only. Monovalent antisera are intended for use in rapid slide agglutination tests for further identification.
Perform O and Vi antigen determination first, then H antigen determination subsequently.
H-antigens can normally be determined by slide agglutination, however some strains are not sufficiently richly flagellated in which case tube agglutination should be performed according to standard tube agglutination methods. Also for reliable identification, positive results obtained by slide agglutination with H sera should be confirmed by tube agglutination tests with a formaldehyde-killed broth culture.
H-antisera contain sodium azide as a preservative, they should not be used for phase induction.

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.

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MAST ASSURE™ ANTISERA – *Salmonella* O agglutinin content

Polyvalent O Antisera

Antiserum name	O agglutinins present
Omnivalent	2, 3, 4, 5, 7, 8, 9, 10, 12, 15, 19, 34, 46, 11, 13, 14, 16, 17, 18, 21, 22, 23, 24, 28, 30, 35, 38, 39, 40, 41, 42, 43, 44, 45, 47, 48, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 63, 65, 66, 67
Polyvalent A-G	2, 3, 4, 5, 7, 8, 9, 10, 12, 15, 19, 34, 46, 11, 13
Polyvalent A-S	2, 3, 4, 5, 7, 8, 9, 10, 12, 15, 19, 34, 46, 11, 13, 14, 16, 17, 18, 21, 22, 23, 24, 28, 30, 35, 38, 39, 40, 41
Polyvalent O	2, 3, 4, 5, 7, 8, 9, 10, 12, 15, 19, 34, 46
Polyvalent O1	11, 13, 14, 16, 18, 21, 22, 23, 24, 35

Monovalent O Antisera

Antiserum name	O agglutinins present
Group O2	2
Group O4	4, 5
Group O7	7
Group O8	8
Group O9	9
Group O9, 46	46
Group O3, 10	10, 15, 34
Group O1, 3, 19	19
Group O11	11
Group O13	13, 22, 23
Group O6, 14	14, 24, 25
Group O18	18
Group O21	21
Group O35	35

MAST ASSURE™ ANTISERA– *Salmonella* H agglutinin content

Antiserum name	H agglutinins present
H-a	a
H-b	b
H-c	c
H-d	d
H-e,h	h
H-G	g, f, p, m, t
H-i	i
H-k	k
H-L	l, w
H-r	r
H-y	y
H-e,n	n, x
H-1	1, 2, 5, 6, 7, z6
H-z	z
H-z4	z4, z23, z24
H-z10	z10
H-z29	z29
H-v	v
H-w	w
H-z13	z13
H-z28	z28
H-2	2

Antiserum name	H agglutinins present
H-5	5
H-6	6
H-7	7
H-z6	z6
H-f	f
H-m	m
H-p	p
H-q	q
H-s	s
H-t	t
H-u	u
H-z23	z23
H-z24	z24
H-z32	z32
H-x	x
H-z15	z15
Rapid 1	b, d, h, n, x, r
Rapid 2	b, h, n, x, k, l, w
Rapid 3	d, n, h, x, k, g, f, p, m, t
H-E(Complex)	h, n, x
Phase 1&2	All H-types