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Salmonella O Polyvalent , Vi Antisera Salmonella O Group & O Factor Antisera

Salmonella antisera are produced for serological identification of *Salmonella*, based on agglutination method. These polyclonal antibodies are prepared by immunizing rabbit with the standard strains. For high specificity: the non-specific agglutinins have been removed by absorption.

Preservative: 0.1% Sodium azide

Storage condition: 2-8°C

On storage, some antisera may become slightly turbid; this does not necessarily indicate deterioration and antisera may be clarified by centrifugation or filtration before use. Gross turbidity indicates contamination and such antisera should be discarded. Do not freeze antisera.

Complete identifications of *Salmonella* requires cultural isolation, biochemical characterization and serotyping. However well defined the serology, the use of serological procedures do not supersede cultural isolation and biochemical characterization.

Salmonella O polyvalent antisera as following list

Cat No.	Description	Groups Present
AS002	O Poly. A-S	A,B,C,D,E,F,G,H,I, ...,O:35,38,39,40,41(S)
AS003	O Poly. A-I	A,B,C,D,E, F,G,H,I
AS004	OMA	A,B,D,E, O:21(L)
AS005	OMB	C,F,G,H
AS006	OMC	1,17,18,28,30,35,38
AS007	OMD	39,40,41,42,43,44,45
AS008	OME	47,48,50,51,52,53,61
AS009	OMF	54,55,56,57,58,59
AS010	OMG	60,62,63,65,66,67

Salmonella O group antisera as following list

Cat No.	Description	Factors Present	Cat No.	Description	Factors Present
AS021	O Group A	O: 1,2,12	AS038	O Group 40(R)	O: 40
AS022	O Group B	O: 4,5,27	AS039	O Group 41(S)	O: 41
AS023	O Group C	O: 6,7,8,14,20	AS040	O Group 42(T)	O: 42
AS024	O Group D	O: 9,46	AS...
AS025	O Group E	O: 3,10,15,19,34	AS...
AS026	O Group F	O: 11	AS051	O Group 55	O: 55
AS027	O Group G	O: 13,22,23	AS052	O Group 56	O: 56
AS028	O Group H	O: 6,14,24	AS053	O Group 57	O: 57
AS029	O Group I	O: 16	AS054	O Group 58	O: 58
AS030	O Group 17(J)	O: 17	AS055	O Group 59	O: 59
AS031	O Group 18(K)	O: 18	AS056	O Group 60	O: 60
AS032	O Group 21(L)	O: 21	AS057	O Group 61	O: 61
AS033	O Group 28(M)	O: 28	AS058	O Group 62	O: 62
AS034	O Group 30(N)	O: 30	AS059	O Group 63	O: 63
AS035	O Group 35(O)	O: 35	AS060	O Group 65	O: 65
AS036	O Group 38(P)	O: 38	AS061	O Group 66	O: 66
AS037	O Group 39(Q)	O: 39	AS062	O Group 67	O: 67

Salmonella Vi antiserum as following list

Cat No.	Description
AS 111	Salmonella Vi

Salmonella O factor antisera as following list

Cat No.	Description	Cat No.	Description
AS081	O: 1	AS092	O: 14
AS082	O: 2	AS093	O: 15
AS083	O: 4	AS094	O: 19
AS084	O: 5	AS095	O: 20
AS085	O: 6 ₁	AS096	O: 22
AS086	O: 6 ₂	AS097	O: 23
AS087	O: 7	AS099	O: 25
AS088	O: 8	AS100	O: 27
AS089	O: 9	AS101	O: 34
AS090	O: 10	AS102	O: 46
AS091	O: 12		

O-antigen test Procedure

1. Add one drop of saline (0.85% NaCl) as a control on a glass slide by the use of a wire. Transfer a loop full of culture from the Nutrient agar (NA) plate onto the glass slide and mix with the drop of saline. Agglutination within 30 seconds indicates that it's rough strains. The strain can't be used for serotyping. Proceed serotyping with antisera if no agglutination are recorded.

2. Add one drop of Salmonella OMA,OMB,OMC antisera (Initiate tests with these three pools of antisera on each test area on the slide, as the majority of the cultures are present in group A-P (O:38)). Add a loop full of culture from NA plate to each spot of antiserum. Mix carefully the culture with the O-serum. Rock the glass slide gently for one minute. Agglutination with the pool antisera indicates that the strain has an O-antigen present in the specific pool antisera used. It's a screen procedure.

(If the strain shows negative agglutination with OMA,OMB,OMC, you must further test with OMD,OME,OMF and OMG).

3. If the strain agglutinates with OMA,
continue testing with O group A,B,D,E,O : 21(L)
If the strain agglutinates with OMB,
continue testing with O group C,F,G, H
If the strain agglutinates with OMC,
continue testing with O group I, O : 17,18,28,30,35,38
If the strain agglutinates with OMD,
continue testing with O group O : 39,40,41,42,43,44,45
If the strain agglutinates with OME,
continue testing with O group O : 47,48,50,51,52, 53,61
If the strain agglutinates with OMF,
continue testing with O group O : 54,55,56,57,58,59
If the strain agglutinates with OMG,
continue testing with O group O : 60,62,63,65,66,67

4. In the next step the serotype is narrowed even further down. Continue with the single factor antisera if the strain agglutinates with the group antisera.

For example:

If the strain agglutinates with O group B,
continue testing with O : 1, O : 4, O : 5, O : 12, O : 27 antisera

If the strain agglutinates with O group C,
continue testing with O : 61, O : 62, O : 7, O : 8, O : 14, O : 20
antisera

If the strain agglutinates with O group D,
continue testing with O : 1, O : 9, O : 12, O : 27, O : 46 antisera

If the strain agglutinates with O group E,
continue testing with O : 1, O : 10, O : 15, O : 19, O : 34 antisera

Remark : Concerning to O factor of each group , please refer to Antigenic Formulas of the *Salmonella* Serovars 9th edition , 2007, WHO Collaborating Centre for Reference and Research on *Salmonella* , Institute Pasteur , Paris , France *4

Vi-antigen test Procedure

Some strains of *S. Typhi* , *S. Paratyphi C* and *S. Dublin* may be haven't been agglutinated with O antisera, must be tested with Vi antiserum.

Transfer fresh culture from Nutrient Agar, Trypticase Soy Agar or TSI Agar to be tested with Vi antiserum. If results show the culture agglutinated with Vi antiserum and non-agglutinated with O antisera suspend 2 loopful of culture in 1ml of Normal saline (0.85% NaCl) then heat at 100 °C for 15-60 minutes to destroy Vi antigen. Use the culture sediment to retest slide agglutination with O antisera, which should show positive result.

Reference:

1. Edward,P.R. and Ewing. W.H.,1986, Identification of Enterobacteriaceae, 4th Edition,Burgess Company, Minnesota.
2. Kauffmann, F., Classification of Bacteria , 1975, Munksgarrd , Copenhagen.
3. Michel Y. Popoff , 2001, Guidelines for The Preparation Of *Salmonella* Antisera , 8th edition., WHO Collarboraing Centre for Reference and Research on *Salmonella*, Institute Pasteur, Paris, France.
4. Michel Y. Popoff ,2007 Antigenic formulas of the *Salmonella* Serovars, 9th edition, WHO Collarboraing Centre for Reference and Research on *Salmonella*, Institute Pasteur, Paris, France.
5. Manual for the laboratory Identification and Antimicrobial Susceptibility Testing of Bacterial Pathogens of Public Health Importance in the Developing World , 2003 , Center for Disease Control and Prevention : National Center for Infectious Diseases and WHO : Department of Communicable Disease Surveillance and Response.



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