

PNEUMOCOCCUS



STATENS
SERUM
INSTITUT

*prevention and control
of infectious diseases
and congenital disorders*

- *Rapid*
- *Easy*
- *Reliable*
- *Flexible*

PNEUMOCOCCAL ANTISERA
FOR IN VITRO DIAGNOSTIC USE



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Pneumococcal antisera

For *in vitro* diagnostic use

■ Rapid

A single capsular reaction test is performed in less than one minute.

■ Easy

A simple procedure with ready-to-use solutions based on standard laboratory equipment.

■ Reliable

Many years of experience guarantee a high standard of diagnostic performance.

■ Flexible

With this collection of antisera partial as well as complete typing of all known pneumococci can be obtained.

Since the 1940's the Streptococcus Unit at Statens Serum Institut has manufactured diagnostic pneumococcal antisera.

The Streptococcus Unit holds the status of WHO Collaborating Centre for Reference and Research on Pneumococci.

Pneumococcal antisera from Statens Serum Institut are used by medical centres and vaccine industries all over the world for typing of pneumococci and as in-process control.

Application

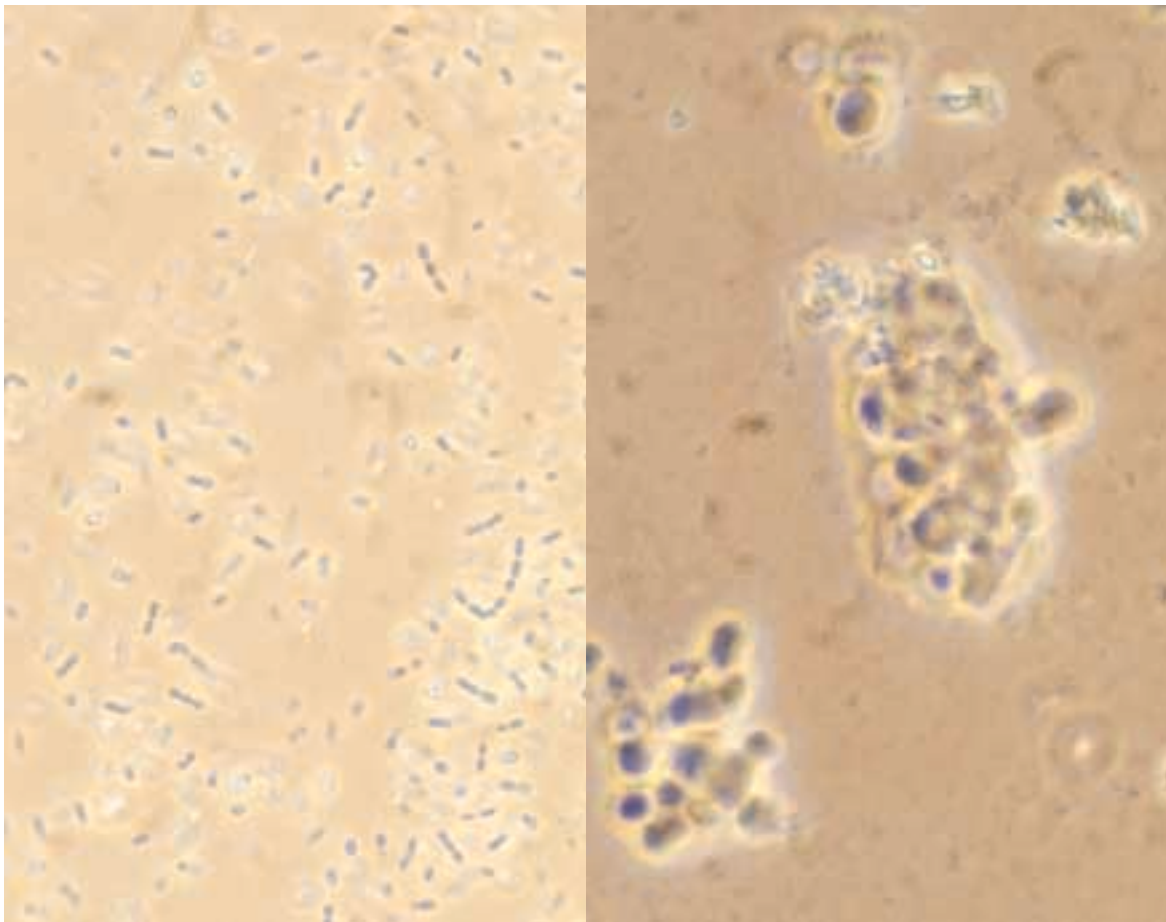
Pneumococcal diagnostic antisera are intended for identification and typing of pneumococci by means of the capsular reaction test. This is a fast and easy-to-perform method that requires only standard microbiological equipment.

Pneumococcal diagnostic antisera can be used for:

1. Identification of *Streptococcus pneumoniae*.
2. Complete typing of all known pneumococci.
3. Typing of only the most dominant or important types (e.g. one of the 23 vaccine types).
4. Partial typing of one or several pneumococci.

All pneumococcal diagnostic antisera from Statens Serum Institut can be used alone or combined, depending on the aim of the study.

Apart from the capsular reaction test, SSI's pneumococcal antisera are used by microbiologists in various methods such as latex agglutination, coagglutination and counterimmunoelectrophoresis.



Description

Statens Serum Institut manufactures 126 ready-to-use pneumococcal antisera with different specificity.

Apart from the anti-C-polysaccharide serum the antisera are raised in rabbits against the pneumococcal capsular polysaccharides.

All the diagnostic antisera are delivered in vials containing 1 ml each (approx. 300 tests). Larger quantities are available upon request.

The antisera are preserved with 15 mM (0,0975%) sodium azide.

Omni serum

This antiserum contains antibodies to all known pneumococcal types. It can be used directly on e.g. CSF or blood for identification purposes.

Titer: 4 when used in the capsular reaction test.

Pool sera

14 different pooled sera each reacting with 8-14 types. Pools A→I cover all 90 different types. The Pools P→T cover the 21 types and/or groups present in the 23-valent pneumococcal vaccine.

Titer: 8 when used in the capsular reaction test.

Group sera

21 different group sera each reacting with all the types within a group.

Titer: 16 when used in the capsular reaction test.

Type sera

25 different type sera each reacting with 1 type.

Titer: 16 when used in the capsular reaction test.

Factor sera

64 different factor sera used to identify the different types within a specific group.

Titer: 4 when used in the capsular reaction test.

Pneumotest

Collection of pneumococcal pool antisera intended for typing and/or grouping of 90-95% of the pneumococci most commonly isolated from blood and CSF.

One kit consists of 12 pooled sera (A→F, H and P→T), and can be ordered with or without a positive control (lyophilized Type 1 culture and its homologous Type serum 1).

Anti C-polysaccharide serum

This antiserum contains antibodies that have been raised in rabbits against the cell wall polysaccharide common to all pneumococci. It can be used to identify especially noncapsulated pneumococcal strains.

Titer: 16 when used in the capsular reaction test.

The flexibility of the product assortment ensures that the user's requirements for typing are always covered with a minimum of tests.

Based on the close collaboration between the departments for diagnostics, epidemiology and production at Statens Serum Institut, the product assortment is always up-to-date.

Specificity

In pool, type and group sera the cross reactions are eliminated by absorption. In factor sera, cross reactions within the group are eliminated by absorption.

Procedure

The capsular reaction test is performed as follows:

1. Mix bacterial suspension and antiserum on a glass slide.
2. Place cover slip on top of the mixture.
3. Observe the mixture in a phase contrast microscope with an oil immersion lens.

If the capsule becomes visible the reaction is positive (see illustration). A **positive** reaction is the result of an in situ immunoprecipitation, leading to a change in the refractive index. In addition the bacteria agglutinate.

Limitations

Diagnostic pneumococcal antisera from Statens Serum Institut are intended for the diagnosis of pure cultures of capsulated pneumococci only.

Storage and shelf life

The antisera should be kept in a dark place at 2-8°C. The expiry date is printed on the package.

Typing support

Pneumococcal strains which can not be typed with any of these antisera may be sent to Statens Serum Institut in Copenhagen for further examination.



Ordering and Information

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Available products

Omni serum

Omni serum	Reacts with all S.pneumoniae types	Article No
		2438

Pool sera

Pool serum	Reacts with S.pneumoniae	Article No
A	Types 1,2,4,5 Group 18	16725
B	Types 3,8 Groups 6,19	16728
C	Types 20,31,40 Groups 7,24	16730
D	Types 36,37 Groups 9,11,16	16731
E	Types 21,39 Groups 10,12,33	16733
F	Type 27 Groups 17,22,32,41	16734
G	Types 29,34,42 Groups 35,47	16735
H	Types 13,14 Groups 15,23,28	16736
I	Types 38,43,44,45,46,48 Group 25	16737
P	Types 1,14 Groups 7,19	16739
Q	Groups 6,18,23	16740
R	Types 3,4 Groups 9,12	16741
S	Types 5,8 Groups 10,15,17	16742
T	Types 2,20 Groups 11,22,33	16743

Group sera

Group serum	Reacts with S.pneumoniae types	Article No
6	6A,6B	16900
7	7F,7A,7B,7C	16902
9	9A,9L,9N,9V	16903
10	10F,10A,10B,10C	16904
11	11F,11A,11B,11C,11D	16905
12	12F,12A,12B	16906
15	15F,15A,15B,15C	16907
16	16F,16A	16908
17	17F,17A	16909
18	18F,18A,18B,18C	16910
19	19F,19A,19B,19C	16911
22	22F,22A	16912
23	23F,23A,23B	16913
24	24F,24A,24B	16914
25	25F,25A	16915
28	28F,28A	16916

32	32F,32A	16917
33	33F,33A,33B,33C,33D	16918
35	35F,35A,35B,35C	16919
41	41F,41A	16920
47	47F,47A	16921

Type sera

Type serum	Reacts with S.pneumoniae type	Article No
1	1	16744
2	2	16745
3	3	16746
4	4	16747
5	5	16748
8	8	16751
13	13	16752
14	14	16753
20	20	16754
21	21	16755
27	27	16756
29	29	16757
31	31	16758
34	34	16759
36	36	16760
37	37	16761
38	38	16762
39	39	16763
40	40	16764
42	42	16765
43	43	16766
44	44	16767
45	45	16769
46	46	16770
48	48	16771

Factor sera

Factor serum	Reacts with S.pneumoniae type/-s	Article No
6a	33D	16922
6b	6A	16923
6c	6B	16924
7b	7F,7A	16925
7c	7A	16926
7e	7B	16927
7f	7C	16931
7h	19B,19C	16933
9b	9L,9N	16934
9d	9A,9V	16935
9e	9N	16936
9g	9V	16937
10b	10F,10B,10C	16939
10d	10A,10B	16940
10f	10C	16941
11b	11F,11B,11C,11D	16942
11c	11A,11C,11D	16944
11f	11B,11C	16945
11g	11F,11B	16946

12b	12F,12B	16947
12c	12A,12B	16948
12e	12B	16949
15b	15F,15B	16950
15c	15F,15A	16951
15e	15B,15C	16952
15h	15B	16953
16b	16F	16954
16c	16A	16955
17b	17F	16956
17c	17A	16957
18c	18F,18C	16958
18d	18A	16959
18e	18F,18B,18C	16960
18f	18F	16961
19b	19F	16962
19c	19A	16963
19f	19C	16964
20b	33A	16965
22b	22F	16966
22c	22A	16967
23b	23F	16968
23c	23A	16969
23d	23B	16970
24c	24A	16971
24d	24F,24A	16972
24e	24B	16973
25b	25F	16974
25c	25A	16975
28b	28F	16976
28c	28A	16977
29b	35B	16978
32a	32F,32A	16979
32b	32A	16980
33b	33F,33A	16981
33e	(33F),(33A),33C	16982
33f	33B,(33C),33D	16983
35a	35F,35A,35B,35C	16984
35b	35F	16986
35c	35A,35B,35C	16992
41a	41F,41A	16994
41b	41F	16995
42a	35C	16996
43b	47A	16997
47a	47F,47A	16998

() Weak positive reaction

Pneumotest	Article No
Pneumotest Pool A→F+H+P→T	36158
Pneumotest- Pool A→F+H+P→T	36159
Plus + Type 1 control	
Type 1 control Lyophilized Type 1 culture + Type serum 1	36171

Anti C-polysaccharide serum	Article No
Anti C-polysaccharide serum	3653