

# 日本組織適合性学会 第11回HLA・QCWS (抗体部門)

## - 検査方法別解析 (FlowPRA法) -

ぱるるプラザ京都 6階 会議室C

国立循環器病センター 輸血管理室 山本 賢

# FlowPRA実施施設: 22施設

## 測定試薬

Screening class -IgG: 22施設、IgM: 7施設

class -IgG: 19施設、IgM: 6施設

Specific class -IgG+IgM: 1施設

Single Antigen class Group 1-4: 8施設

1-8: 4施設

1-10: 3施設

class Group 1-4: 5施設

## 測定機器

ベクトンデッキンソン: 13施設

ベックマンコールター: 9施設

オーソ: 1施設

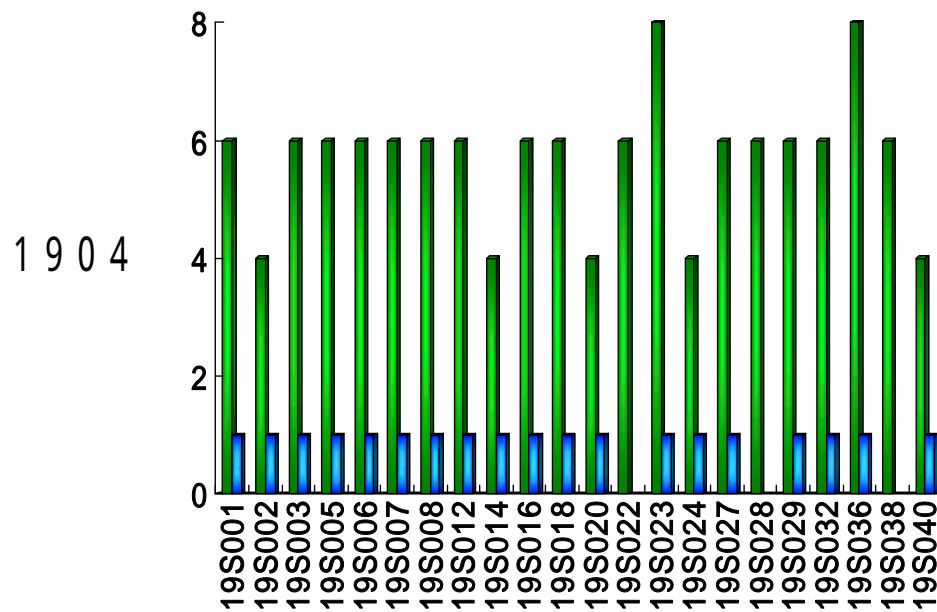
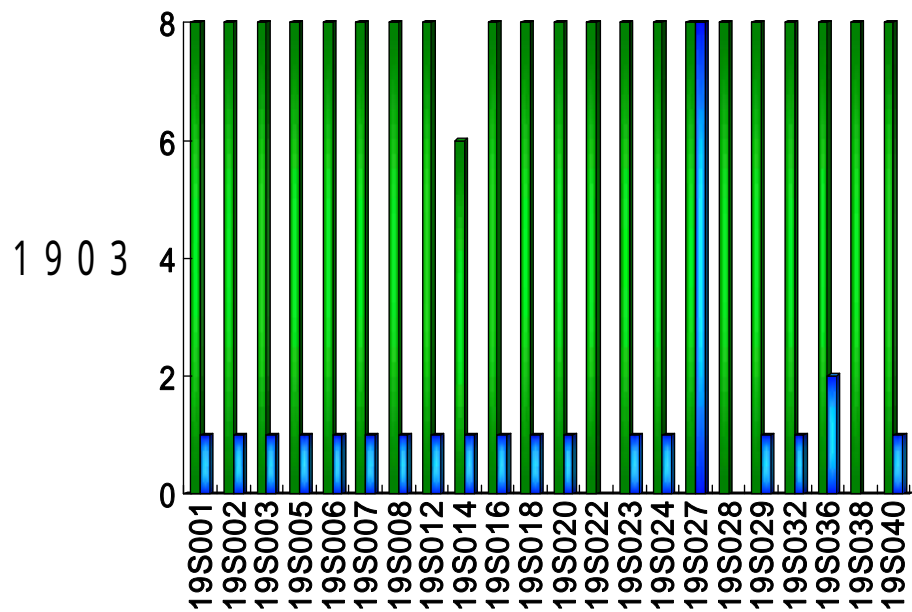
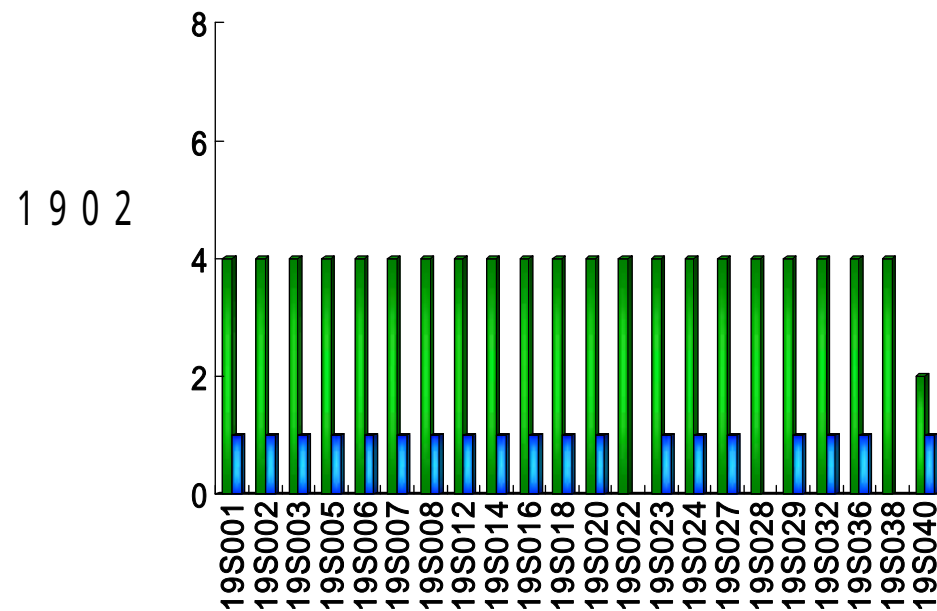
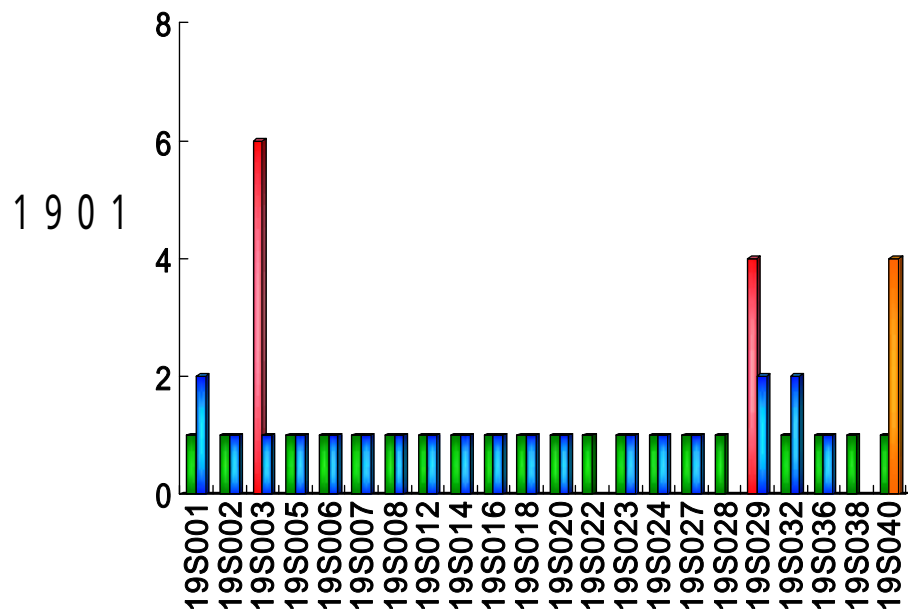
# FlowPRA IgG

ラボコード	1901		1902		1903		1904	
	class	class	class	class	class	class	class	class
19S001	0.89	17.76	32.73	0.71	99.63	1.27	56.85	1.25
19S002	0.3	1.1	28.7	0.8	86.4	0.3	49.6	0.9
19S003	50.9	1.92	31.91	1.61	97.54	1.7	55.47	4.16
19S005	3.9	1.4	31.7	0.4	98.5	0.6	53.2	0.3
19S006	3.44	4.17	28.46	1.23	98.23	2.11	52.92	1.93
19S007	4	2	32	1	100	1	60	1
19S008	6	4	33	1	100	1	67	1
19S012	1.82	1.28	32.12	0.47	99.75	0.9	55.57	0.47
19S014	1.8	0.5	25	0.1	75	0.3	49	0.1
19S016	1.74	3.45	32.18	0.22	97.3	0.37	51.4	0.34
19S018	2.2	0.6	25.2	0.6	94.9	0.4	53.7	0.6
19S020	0.62	0.32	23.82	0.19	90.47	0.24	44.03	0.17
19S022	9.24	NT	28.3	NT	93.9	NT	65.8	NT
19S023	1	0.4	37.6	0.8	95.6	0.6	86.5	2
19S024	1.4	0.54	20.69	0.32	98.77	0.73	42.58	0.59
19S027	2.02	1.16	30.23	0.43	99.82	89.16	60.32	1.49
19S028	1	NT	25.7	NT	98.9	NT	56.2	NT
19S029	27.5	14.1	33.5	0.5	99.3	0.3	65.4	2.3
19S032	8.64	18.18	32.05	1.65	99.61	5.57	66.11	5.05
19S036	4.26	0.25	33.23	3.01	99.14	10.36	80.16	5.54
19S038	3.77	NT	25.04	NT	95.51	NT	52.44	NT
19S040	9.9	27.9	17.7	0.3	90.1	0.6	38.6	0.6

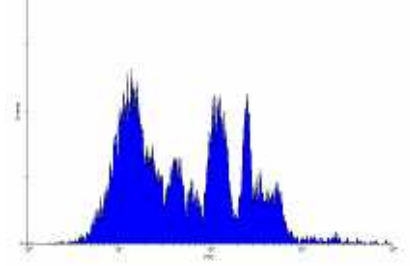
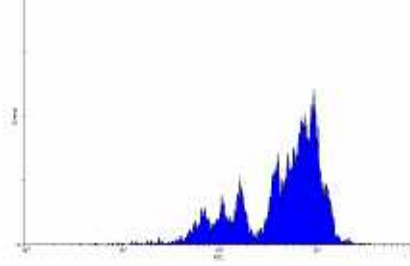
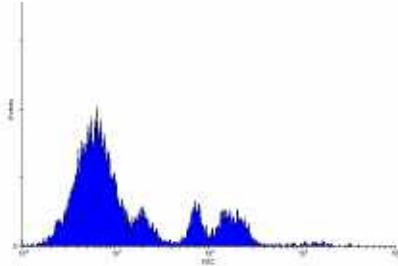
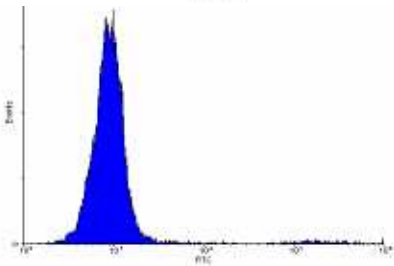
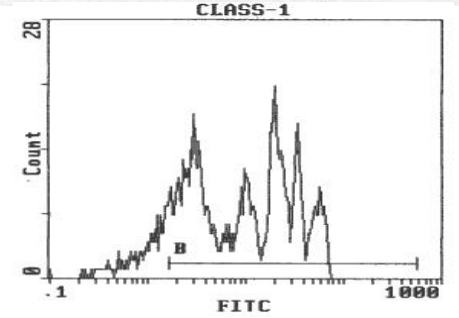
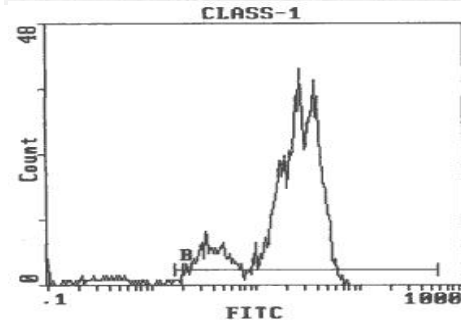
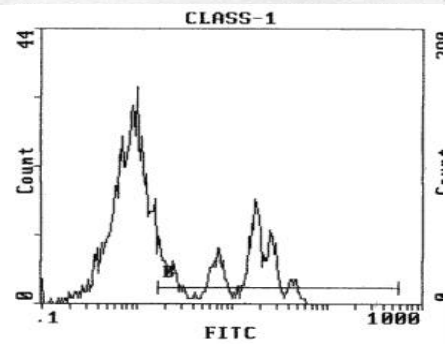
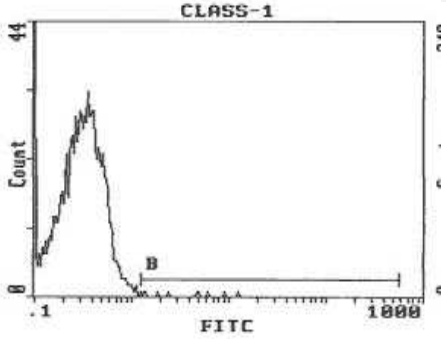
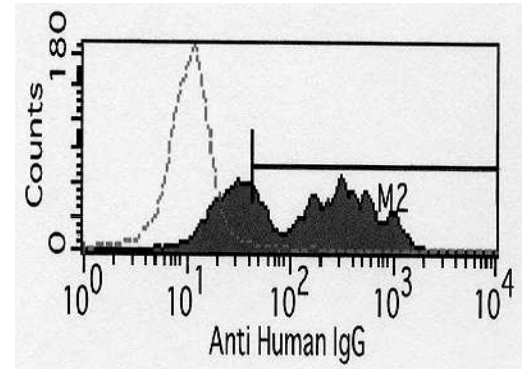
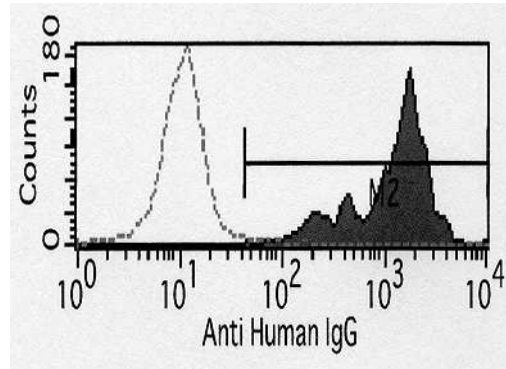
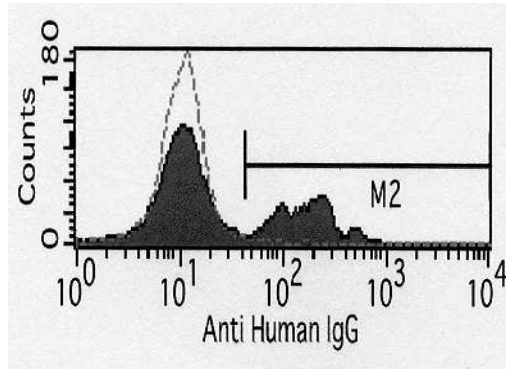
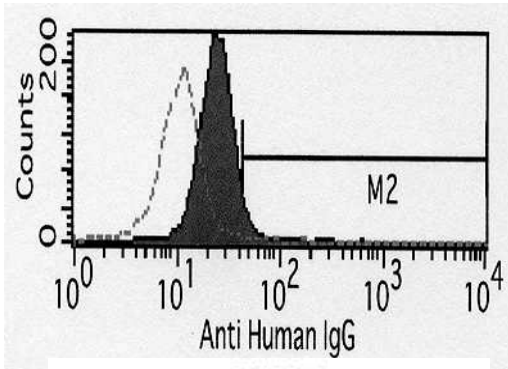
FlowPRA class + -IgG

 class

 class



# 各施設によるカットオフ設定の違い

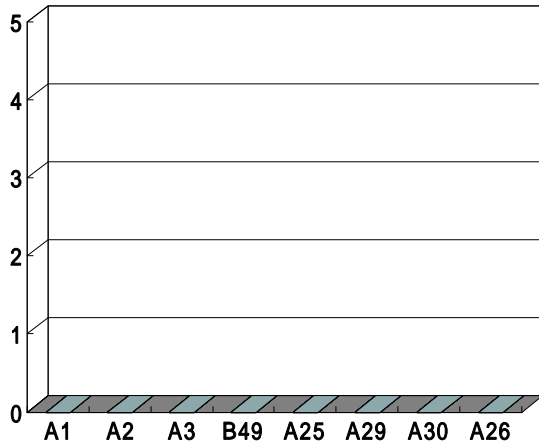
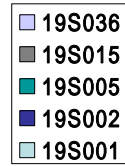


## HLA抗体有無の一致率

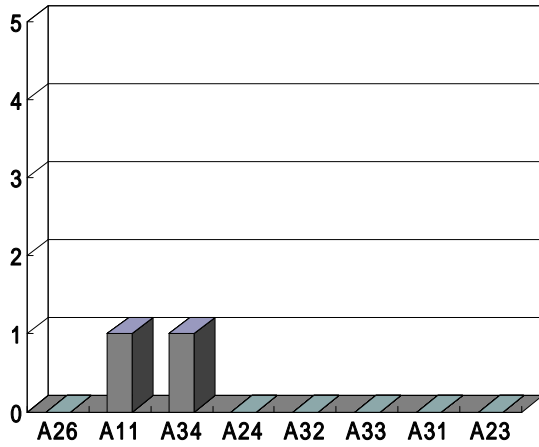
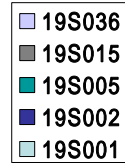
血清	HLA class	HLA class
1901	90.9% (20/22)	94.7% (18/19)
1902	95.5% (21/22)	100% (19/19)
1903	100% (22/22)	100% (19/19)
1904	100% (22/22)	100% (19/19)

# 1901 Single Antigen

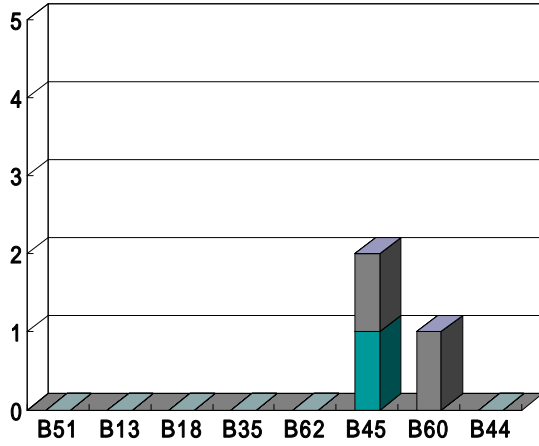
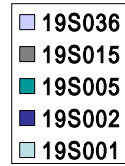
Group 1



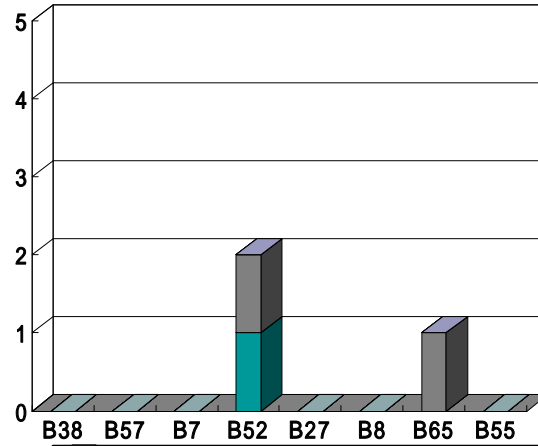
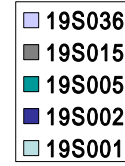
Group 2



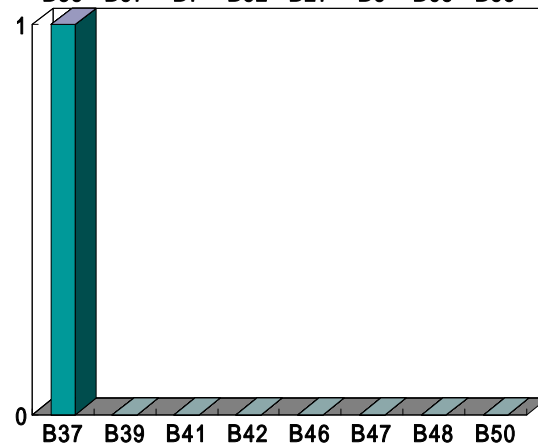
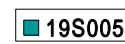
Group 3



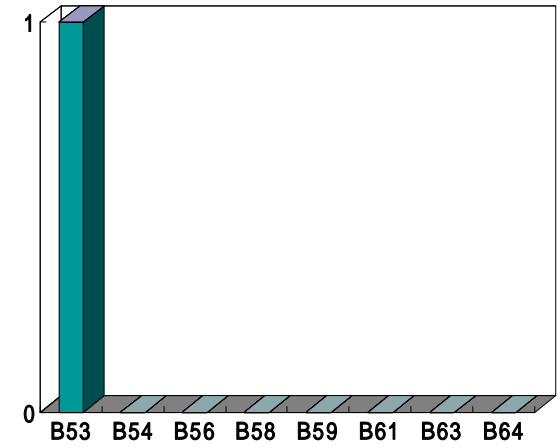
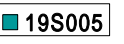
Group 4



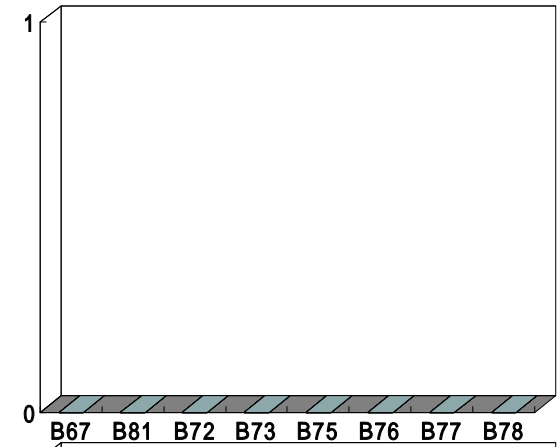
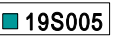
Group 5



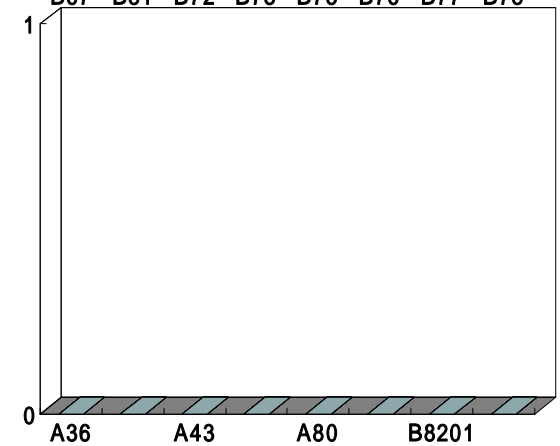
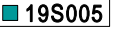
Group 6



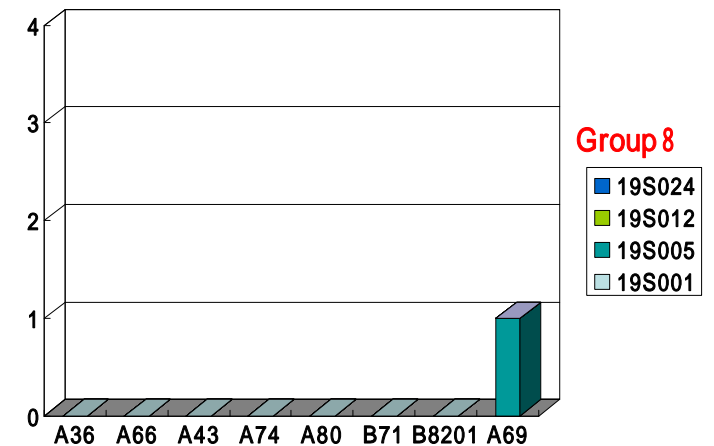
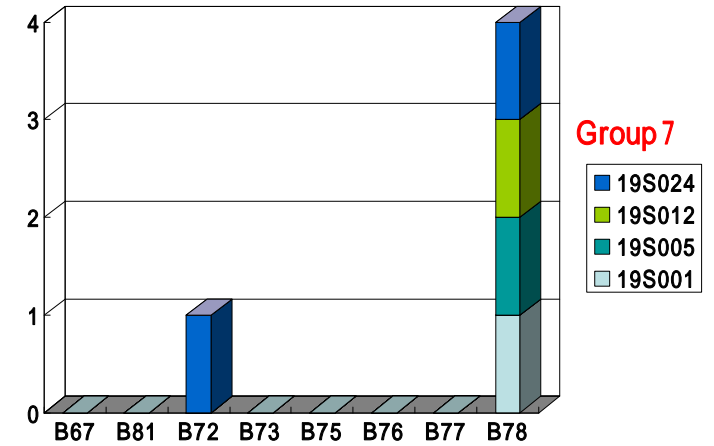
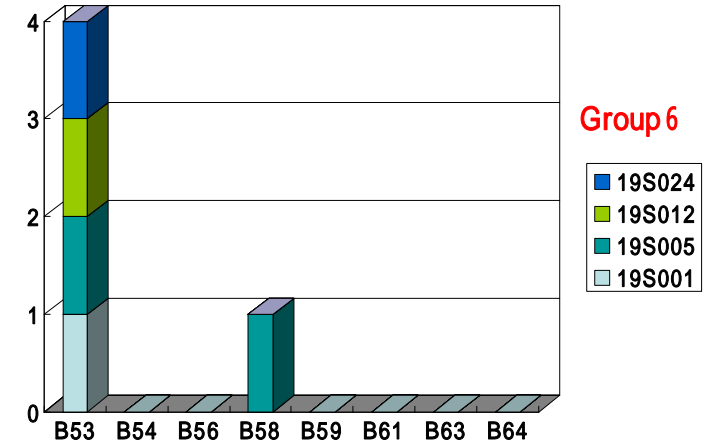
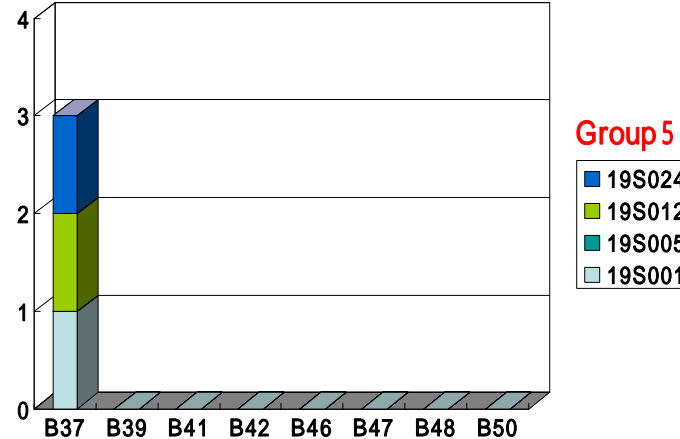
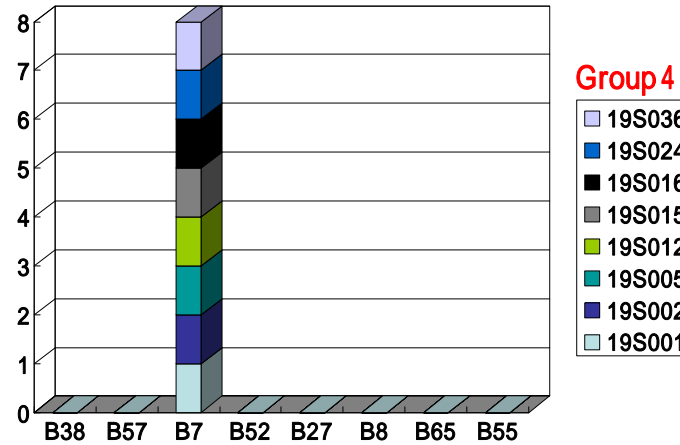
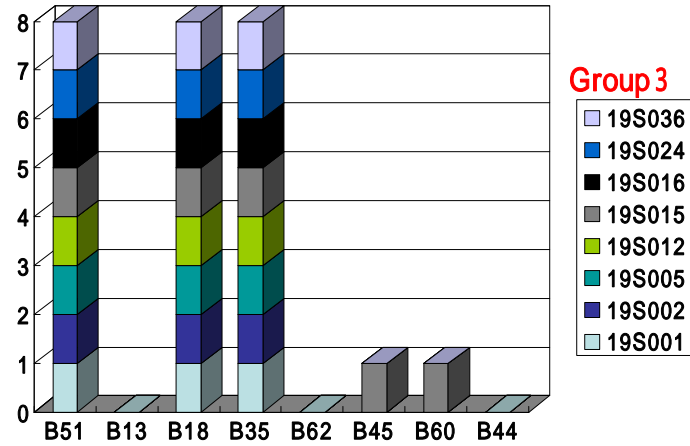
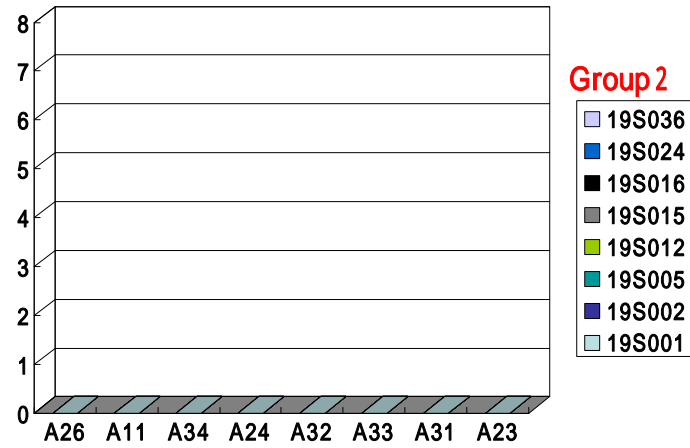
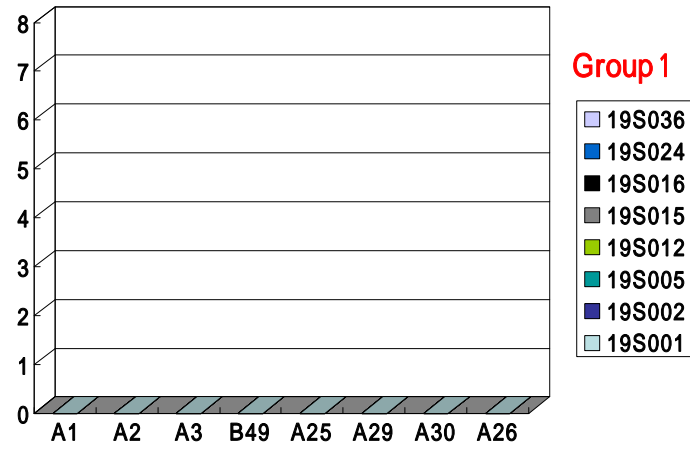
Group 7



Group 8

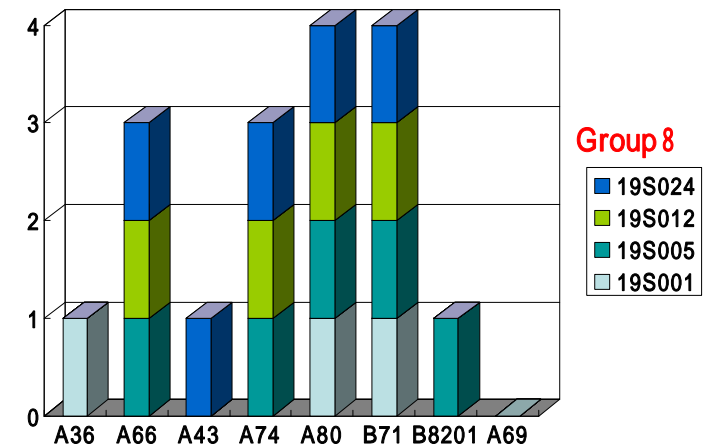
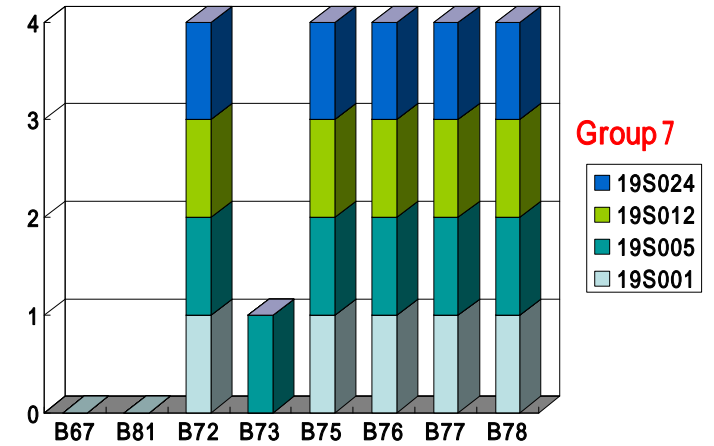
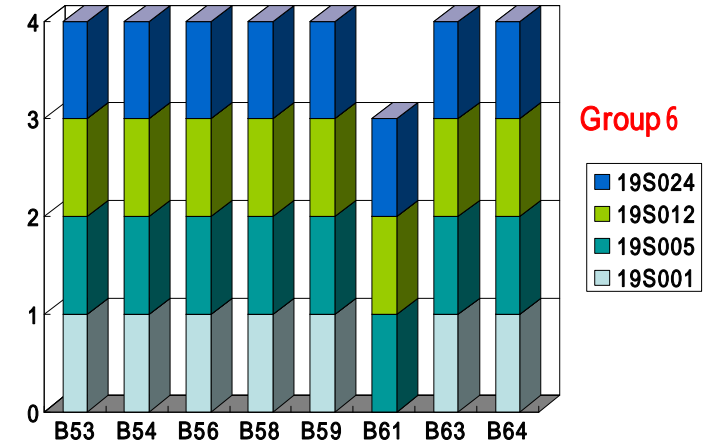
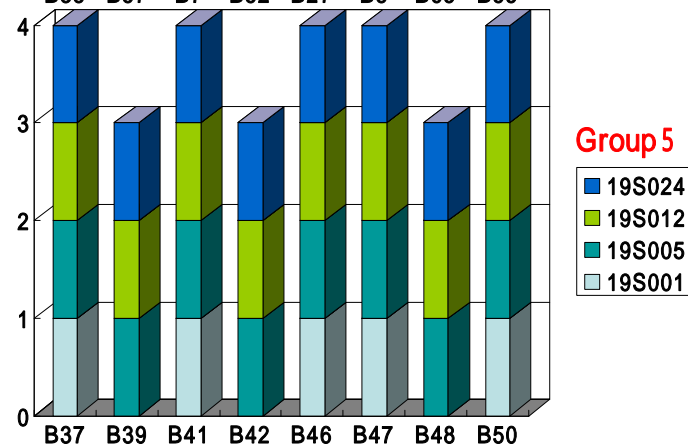
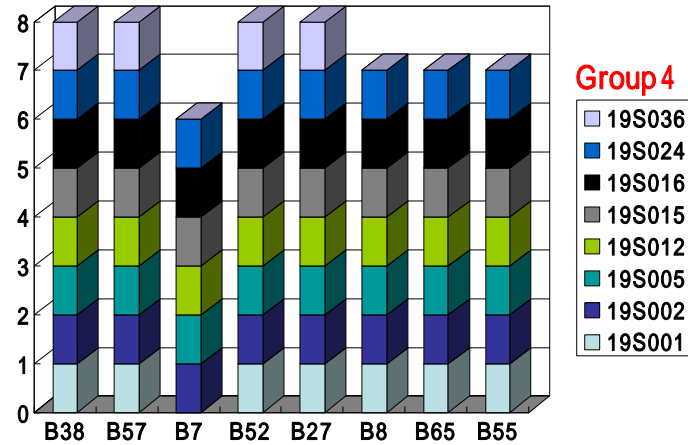
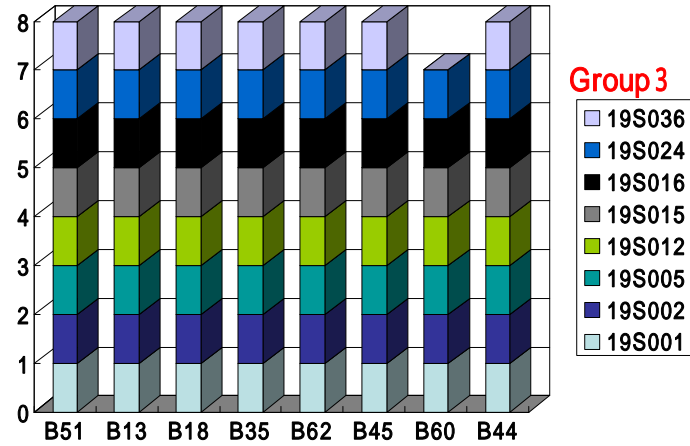
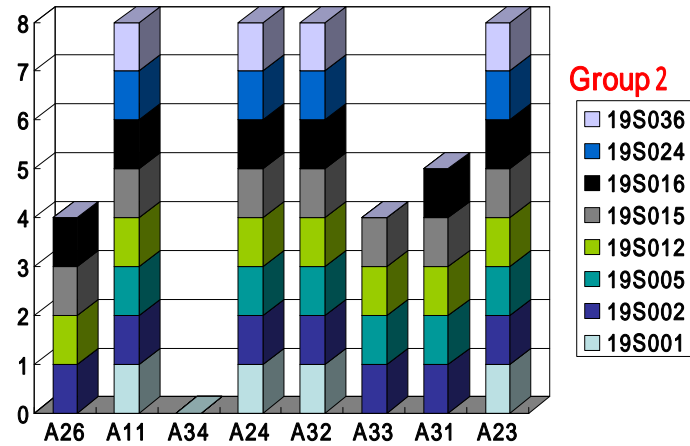
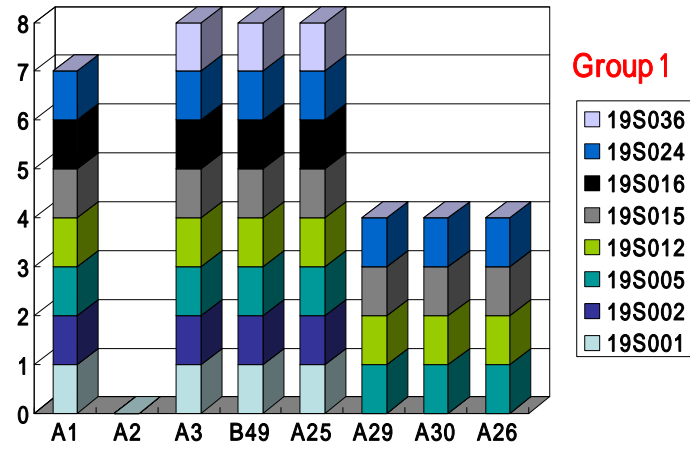


# 1902 Single Antigen

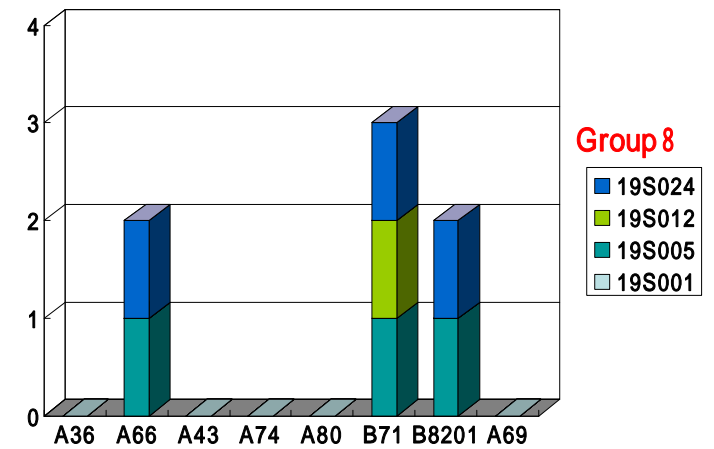
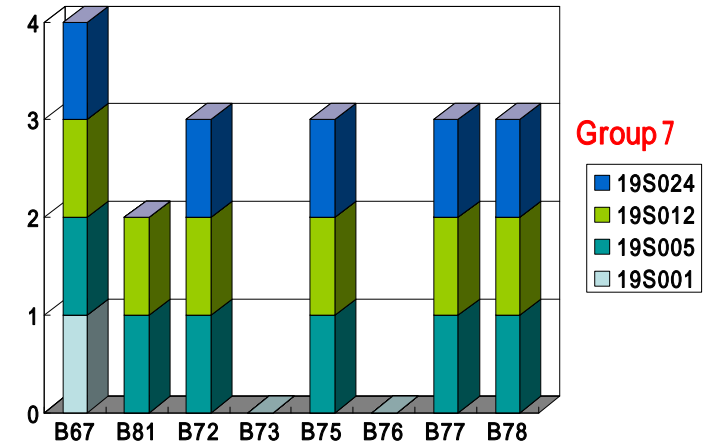
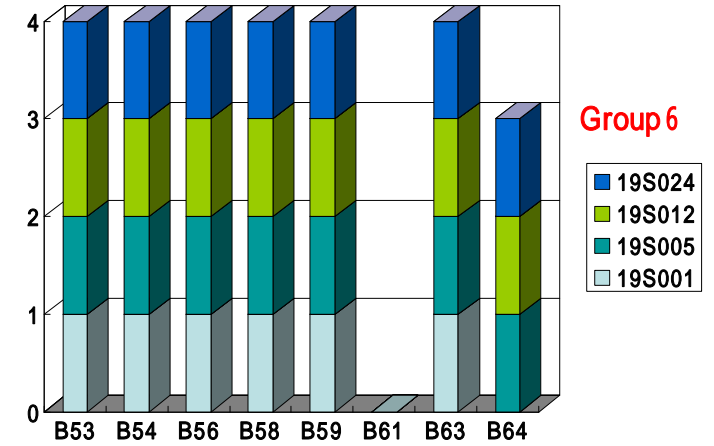
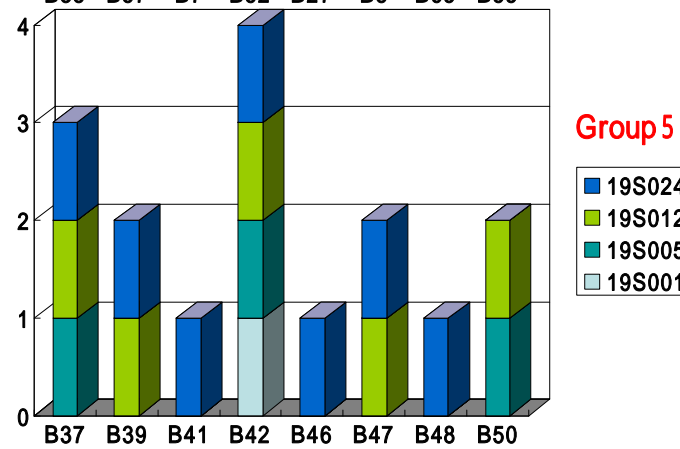
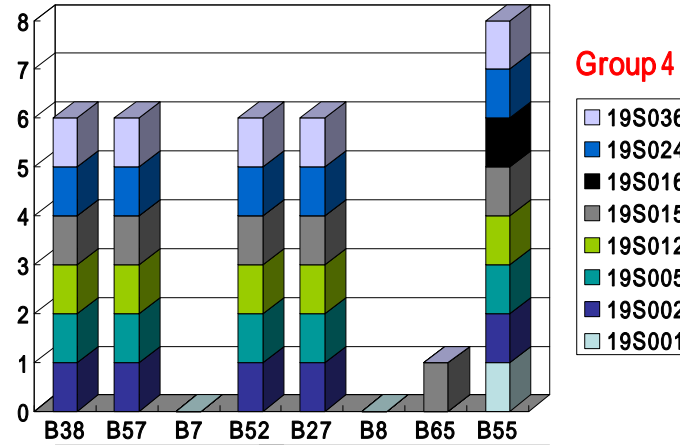
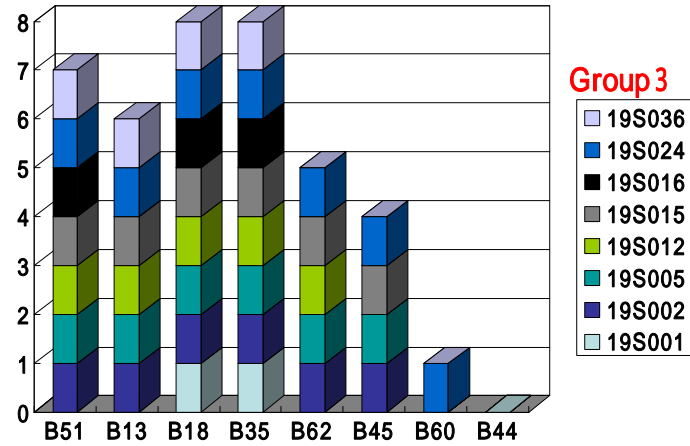
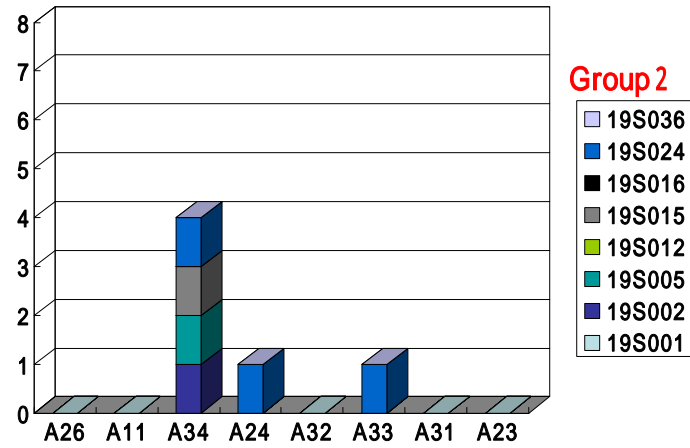
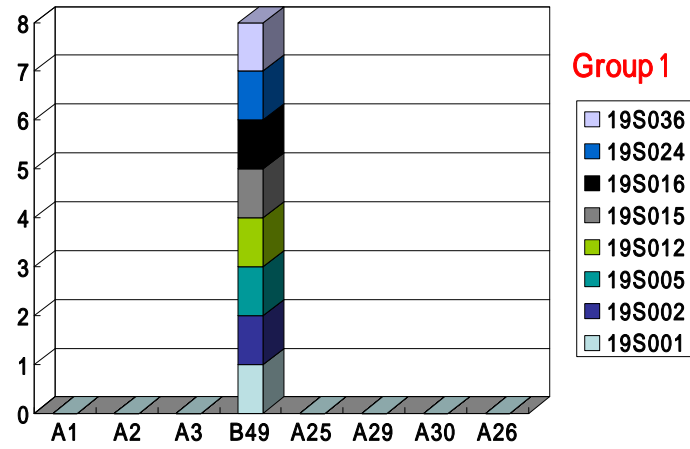




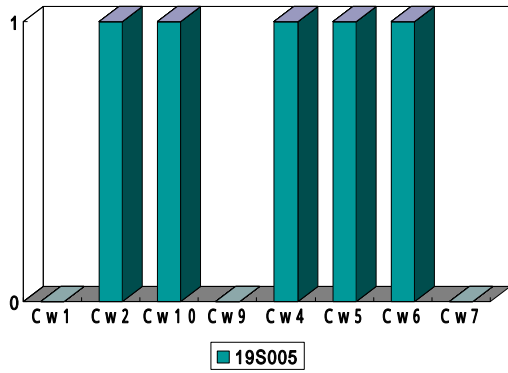
# 1903 Single Antigen



# 1904 Single Antigen

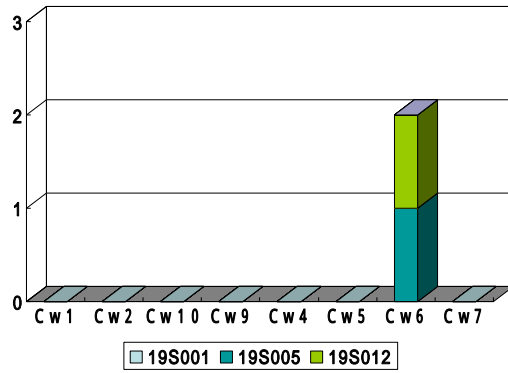


1901



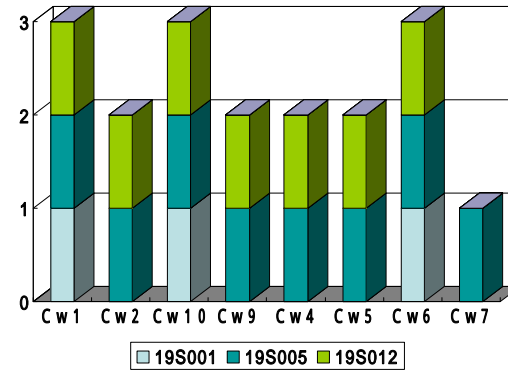
Group9

1902



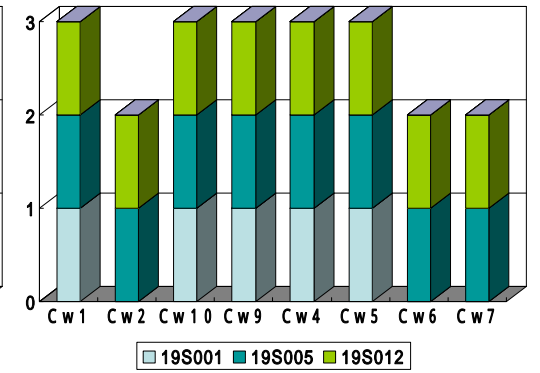
Group9

1903

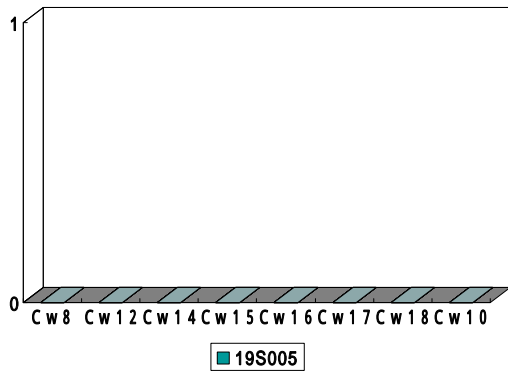


Group9

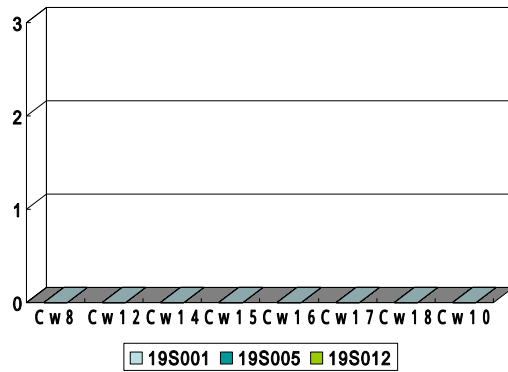
1904



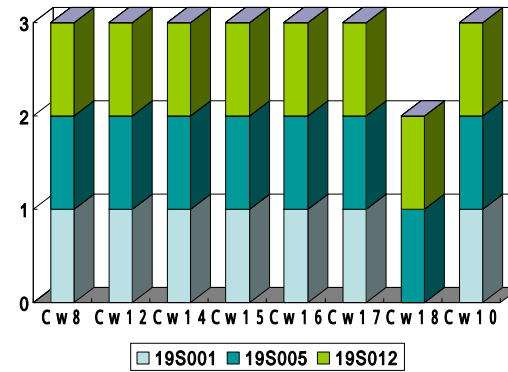
Group9



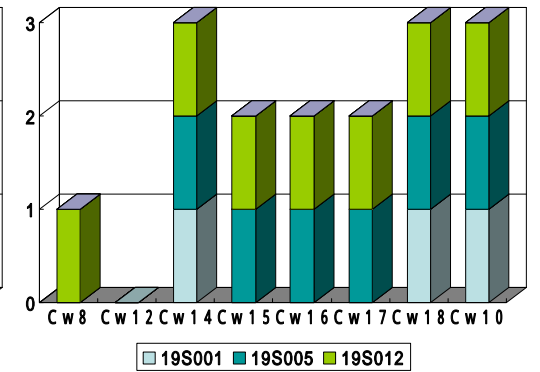
Group10



Group10



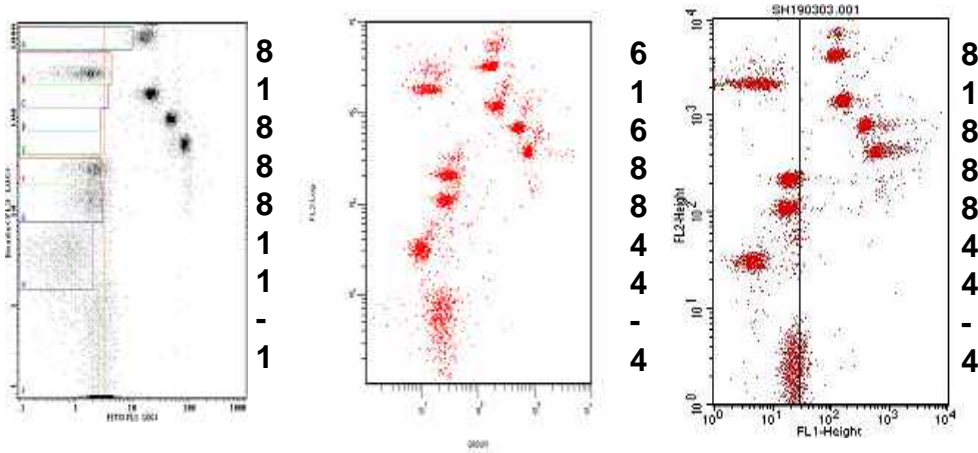
Group10



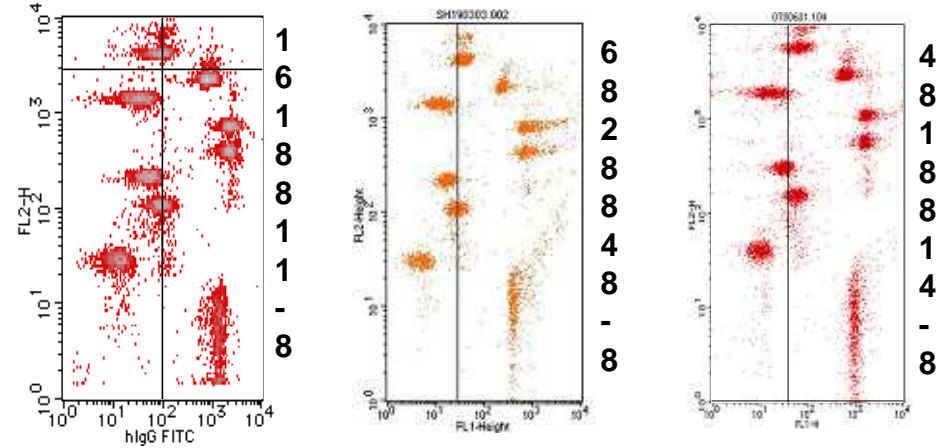
Group10

# Single Antigen サイトグラム

1903 HLA-class Group 1



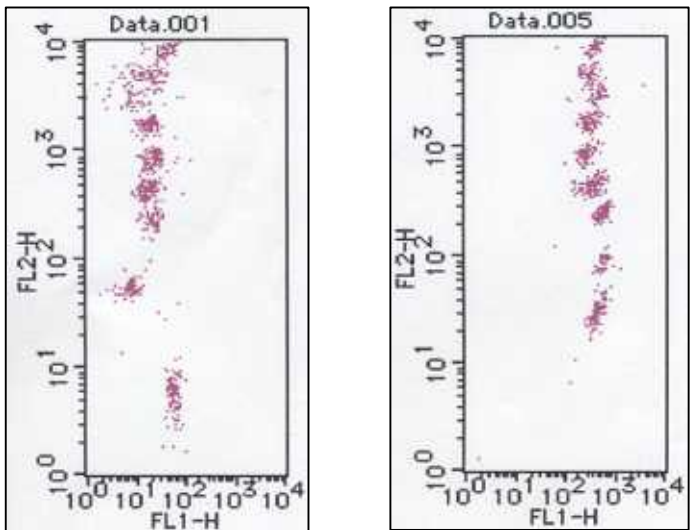
1903 HLA-class Group 2



1903 HLA-class Group 1

negative serum

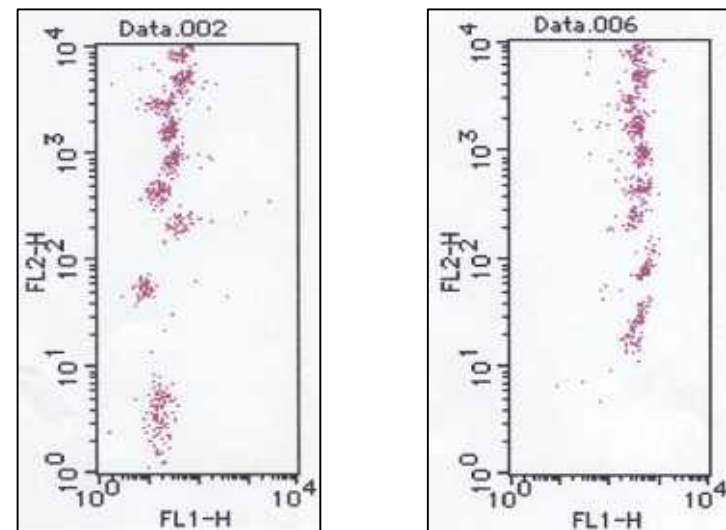
1903 serum



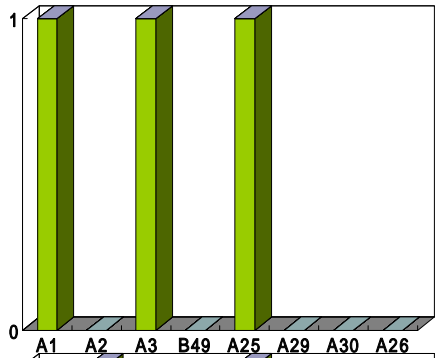
1903 HLA-class Group 2

negative serum

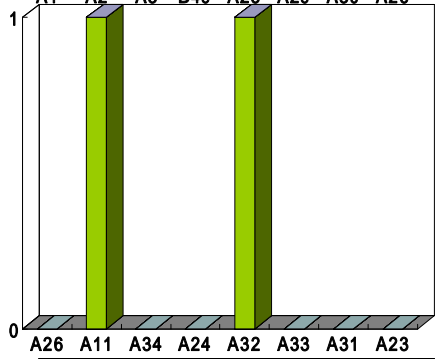
1903 serum



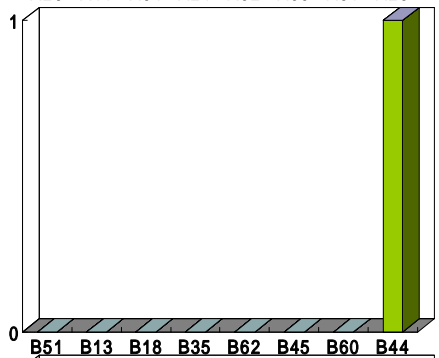
# Class -IgM Single 1901



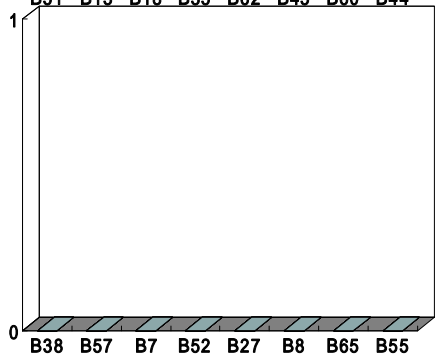
19S012



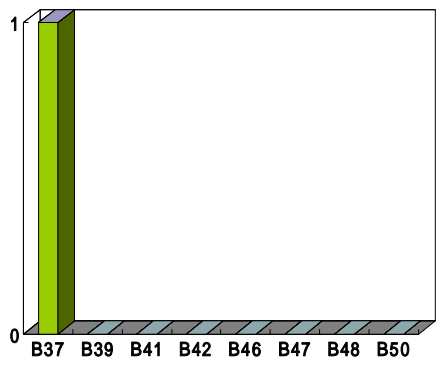
19S012



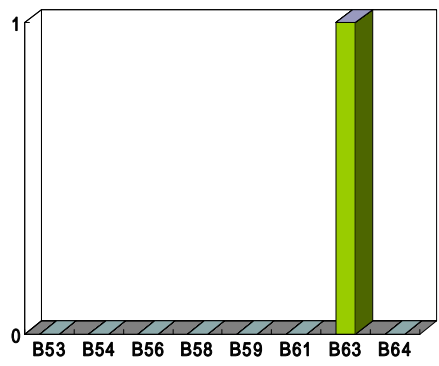
19S012



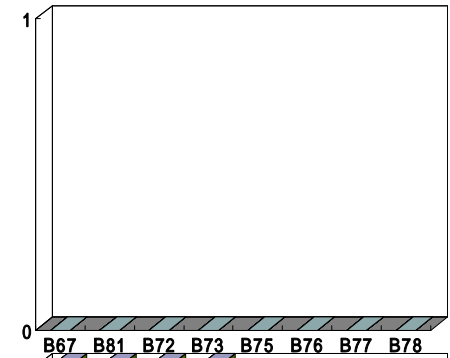
19S012



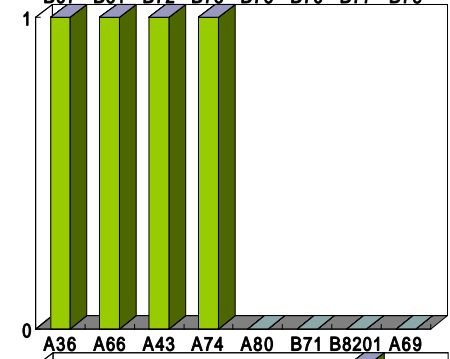
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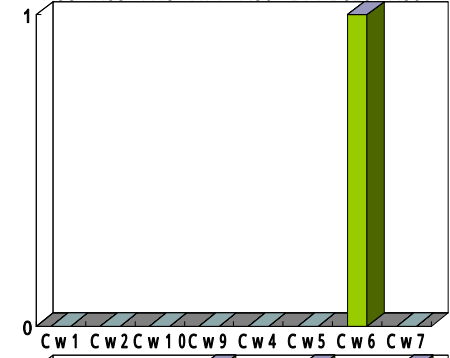
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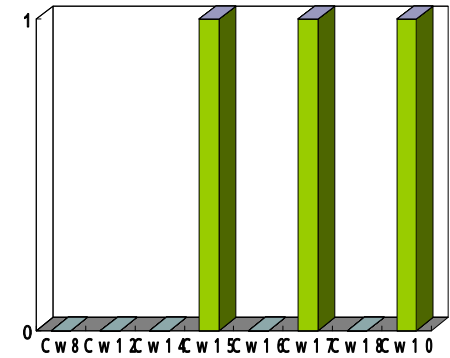
19S012



19S012



19S012



19S012

## FlowPRA IgM

ラボコード	1901		1902		1903		1904	
	class	class	class	class	class	class	class	class
19S005	84.6	0.9	1.8	0.6	24.4	5.2	16.5	23.4
19S006	51.68	1.72	0.91	0.87	31.93	90.62	1.26	2.03
19S012	85.26	1.5	1.78	0.83	39.39	59.73	13.03	5.79
19S014	40	3	0.5	0.4	67	98	1	3
19S027	60.43	NT	0.92	NT	87.63	NT	5.83	NT
19S032	60.64	5.93	1.21	1.76	70.94	63.64	2.59	5.56
19S038	58.02	NT	2.9	NT	54.92	NT	4.22	NT

赤字 > 平均+SD    青字 < 平均+SD    NT: not test

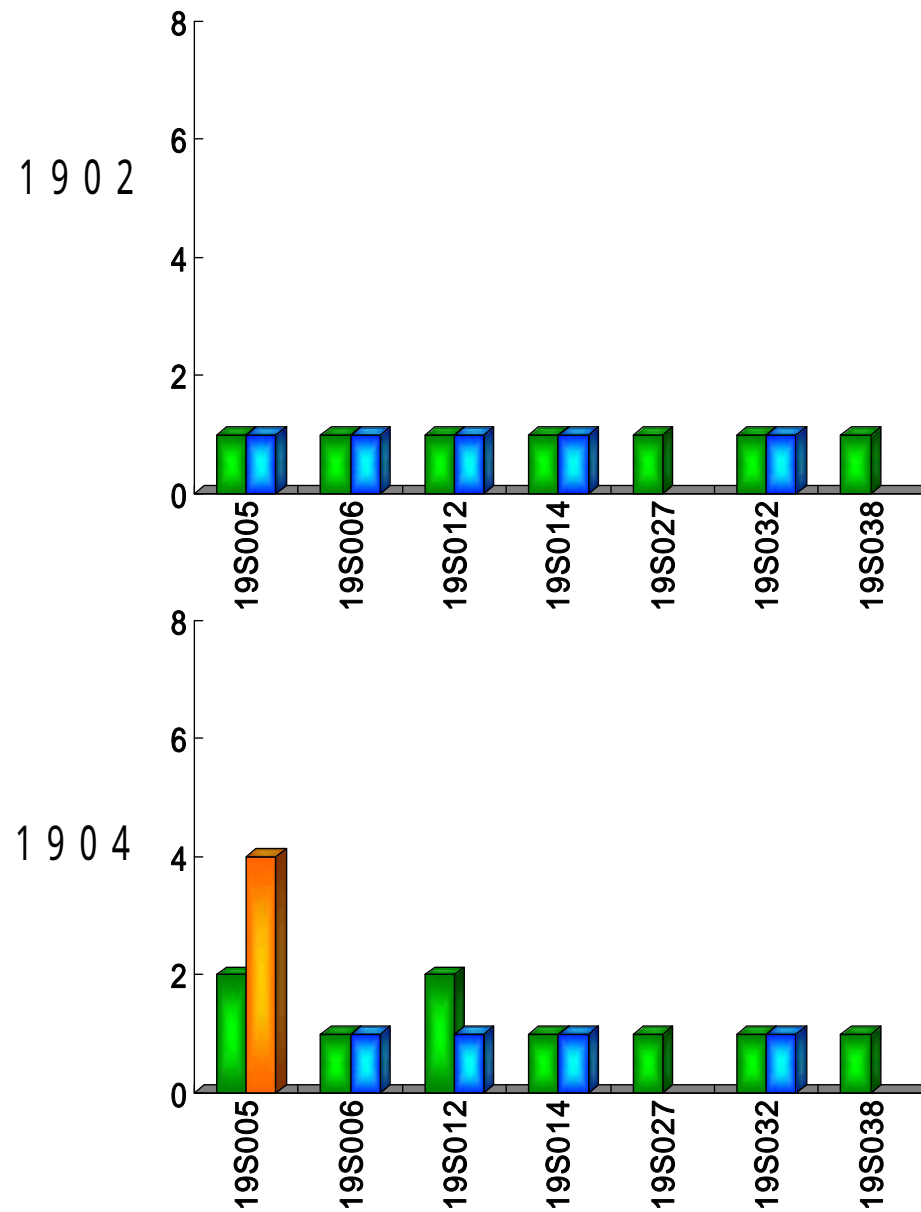
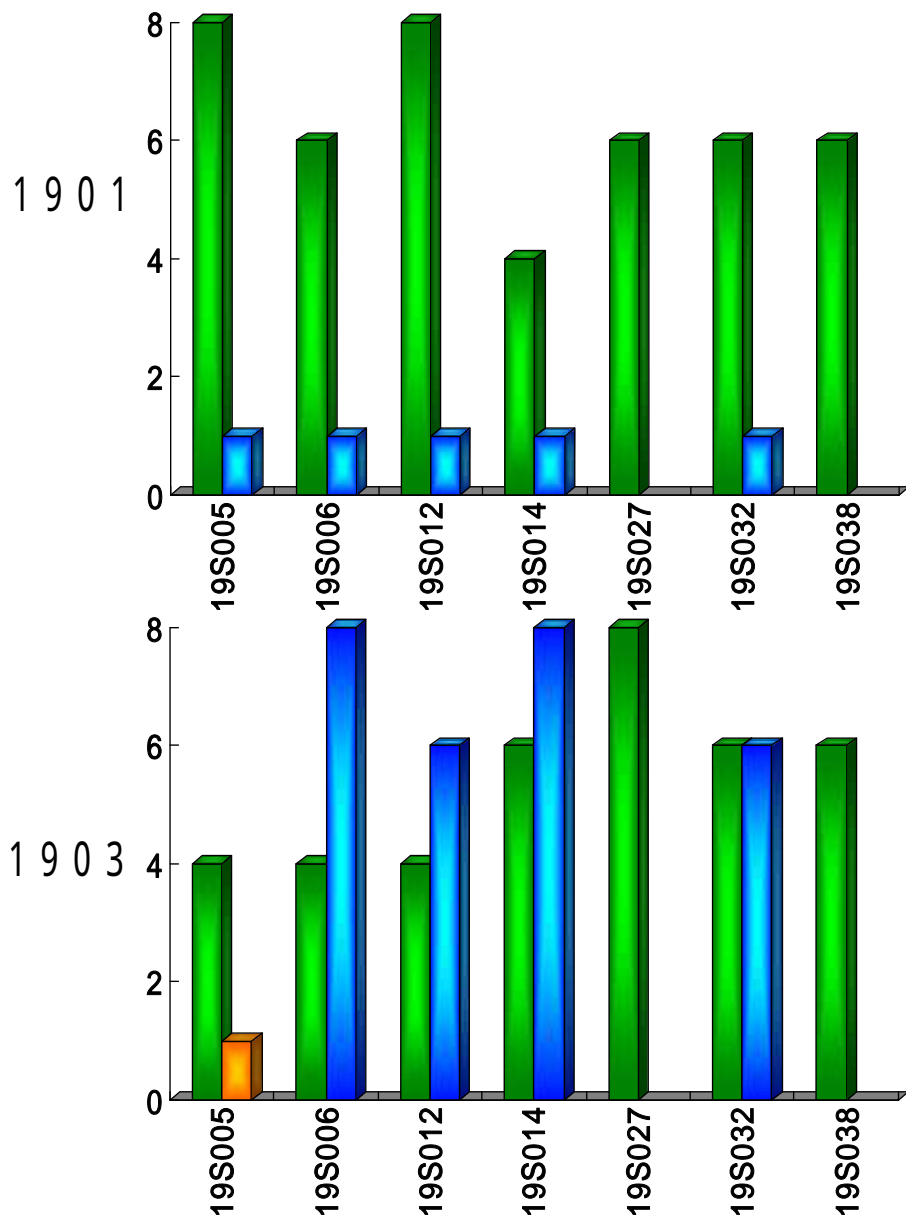
## HLA抗体有無の一致率

血清	HLA class	HLA class
1901	100% (7/7)	100% (5/5)
1902	100% (7/7)	100% (5/5)
1903	100% (7/7)	80.0% (4/5)
1904	100% (7/7)	80.0% (4/5)

FlowPRA class + -IgM

class

class





## まとめ

### FlowPRA Screening test

1. HLA抗体の有無についてIg GおよびIg Mでそれぞれ4、2施設で、判定結果が不一致であった。HLA抗体の判定結果は、患者に直接不利益を与える可能性があるため、早急に抗体有無の判定結果を全施設で一致させる必要があると思われる。  
また、19S018の施設については、判定結果は一致しているものの、ヒストグラム(HG)の全貌が見えておらず、正しく機器設定ができていないと思われる。
2. 昨年同様、%PRAに施設間で差が認められたため、施設間差を少なくするために統一した基準を決める必要がある。  
%PRAをスコア化することで施設間差は少なくなったが、1904の検体(class -Ig G抗体)ではスコアにおいても施設間で差が認められた。
3. 同一測定機種においても差が認められるため(各施設によりパラメータの違い)、機器調整も含め、同一ロットのキットおよびnegative controlでの実施も考える必要があると思われる。

### FlowPRA Single Antigen test

1. 特異性については、判定結果はほぼ一致していたが、1904血清において、検出できている抗体に若干のばらつきが認められた。
2. Single Antigenにおいても、Screeningと同様に統一したリージョンの設定を決める必要がある。