



MOUSE MONOCLONAL ANTIBODIES  
ANTI-RAT IMMUNOGLOBULINS

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## MONOCLONAL ANTIBODIES ANTI-RAT IMMUNOGLOBULIN

### ANTI-LIGHT CHAIN

MAb	Species of the MAb and isotype	Specificity rat immunoglobulin	Avidity* (M <sup>-1</sup> )	Recommended applications	
				Immunoassay**	Immunopurification
MARK-1	mouse IgG1 kappa	kappa light chain	1 x 10 <sup>9</sup>	yes	yes
MARK-3	mouse IgG1 kappa	kappa light chain of the IgK-1a allotype	4.3 x 10 <sup>9</sup>	yes	yes
LO-RK1b-1	rat IgG1 kappa	kappa light chain of the IgK-1b allotype	ND	yes	yes
LO-RK1b-2	rat IgG1 kappa	kappa light chain of the IgK-1b allotype	ND	yes	yes
MARL-15	mouse IgG1 kappa	lambda light chain	2.6 x 10 <sup>10</sup>	yes	yes

\*See technical data sheet for more details. ND: not determined.

## MONOCLONAL ANTIBODIES ANTI-RAT IMMUNOGLOBULIN

### ANTI-HEAVY CHAIN

MAb	Species of the MAb and isotype	Specificity rat immunoglobulin	Avidity* (M <sup>-1</sup> )	Recommended applications	
				Immunoassay**	Immunopurification
MARM-4	mouse IgG1 kappa	mu heavy chain	4 x 10 <sup>9</sup>	yes	yes
MARM-7	mouse IgG1 kappa	mu heavy chain	1.1 x 10 <sup>9</sup>	yes	yes
MARD-3	mouse IgG1 kappa	delta heavy chain	1.1 x 10 <sup>10</sup>	yes	yes
MARA-1	mouse IgG1 kappa	alpha heavy chain	1.1 x 10 <sup>10</sup>	yes	yes
MARA-2	mouse IgG1 kappa	alpha heavy chain	4 x 10 <sup>8</sup>	yes	no
MARE-1	mouse IgG1 kappa	epsilon heavy chain	4 x 10 <sup>9</sup>	yes	yes
MARG1-1	mouse IgG1 kappa	gamma 1 heavy chain	ND	yes	ND
MARG1-2	mouse IgG1 kappa	gamma 1 heavy chain	1 x 10 <sup>9</sup>	yes	Yes
MARG1-15	mouse IgG1 kappa	gamma 1 heavy chain	ND	ND	ND
MARG2a-1	mouse IgG1 kappa	gamma 2a heavy chain	2.1 x 10 <sup>9</sup>	yes	yes
MARG2a-7	mouse IgG1 kappa	gamma 2a heavy chain	6.2 x 10 <sup>9</sup>	yes	ND
MARG2b-3	mouse IgG1 kappa	gamma 2b heavy chain	3 x 10 <sup>9</sup>	yes	ND
MARG2b-8	mouse IgG1 kappa	gamma 2b heavy chain	4.7 x 10 <sup>9</sup>	yes	yes
MARG2c-3	mouse IgG2a kappa	gamma 2c heavy chain	4.8 x 10 <sup>9</sup>	yes	yes
MARG2c-5	mouse IgG2a kappa	gamma 2c heavy chain	5.25 x 10 <sup>9</sup>	yes	yes

\*See technical data sheet for more details. ND: not determined.

**AVIDITY <sup>(1)</sup> OF MOUSE MONOCLONAL ANTIBODIES ANTI-RAT  
IMMUNOGLOBULIN (M-1)**

MAb	TESTED ON MOUSE IMMUNOGLOBULINS								
	IgM-κ IR202	IgD-κ IR731	IgA-κ IR1060	IgE-κ IR162	IgG1-κ IR871	IgG1-κ IR31	IgG2a-κ IR418	IgG2b-κ IR863	IgG2c-κ IR1148
MARM-4	3.5 x 10 <sup>9</sup>								
MARM-7	1.1 x 10 <sup>9</sup>								
MARD-3		1.1 x 10 <sup>10</sup>							
MARA-1			1.1 x 10 <sup>10</sup>						
MARA-2			4.3 x 10 <sup>8</sup>						
MARE-1				3.9 x 10 <sup>9</sup>					
MARG1-1									
MARG1-2					1 x 10 <sup>9</sup>				
MARG2a-1							2.1 x 10 <sup>9</sup>		
MARG2a-7							6.2 x 10 <sup>9</sup>		
MARG2b-3								3.1 x 10 <sup>9</sup>	
MARG2b-8								4.7 x 10 <sup>9</sup>	
MARG2c-3							5.25 x 10 <sup>9</sup>		4.8 x 10 <sup>9</sup>
MARG2c-5									
MARK-1		1.1 x 10 <sup>9</sup>							
MARK-3		4.8 x 10 <sup>9</sup>							
MARL-15						2.6 x 10 <sup>10</sup>			

(1) As determined by the technique of Van Heymingen et al. J. Immunol. Methods 1983, 62: 147-153.

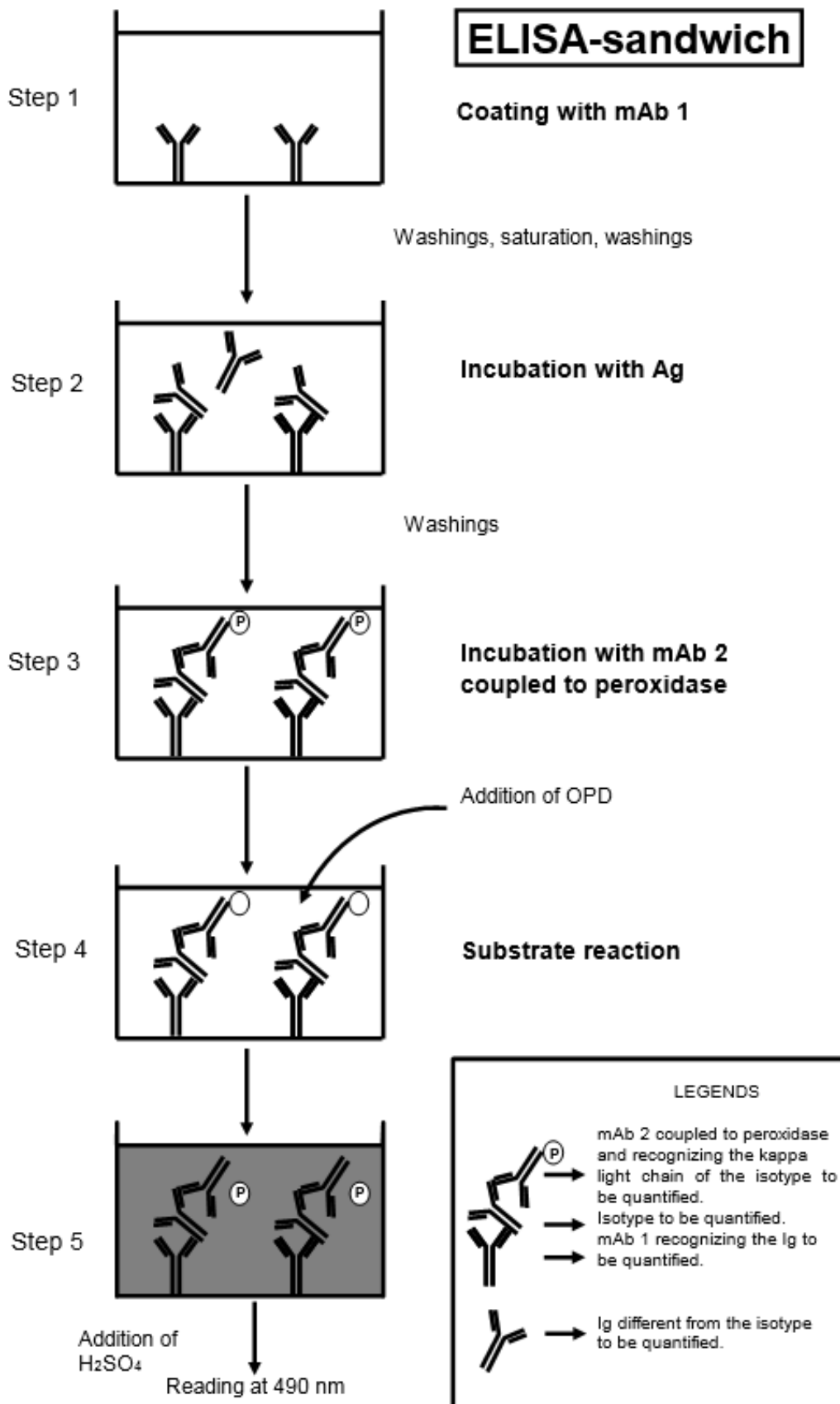
## LOU RAT IMMUNOCYTOMA (PLASMACYTOMA) IMMUNOGLOBULINS

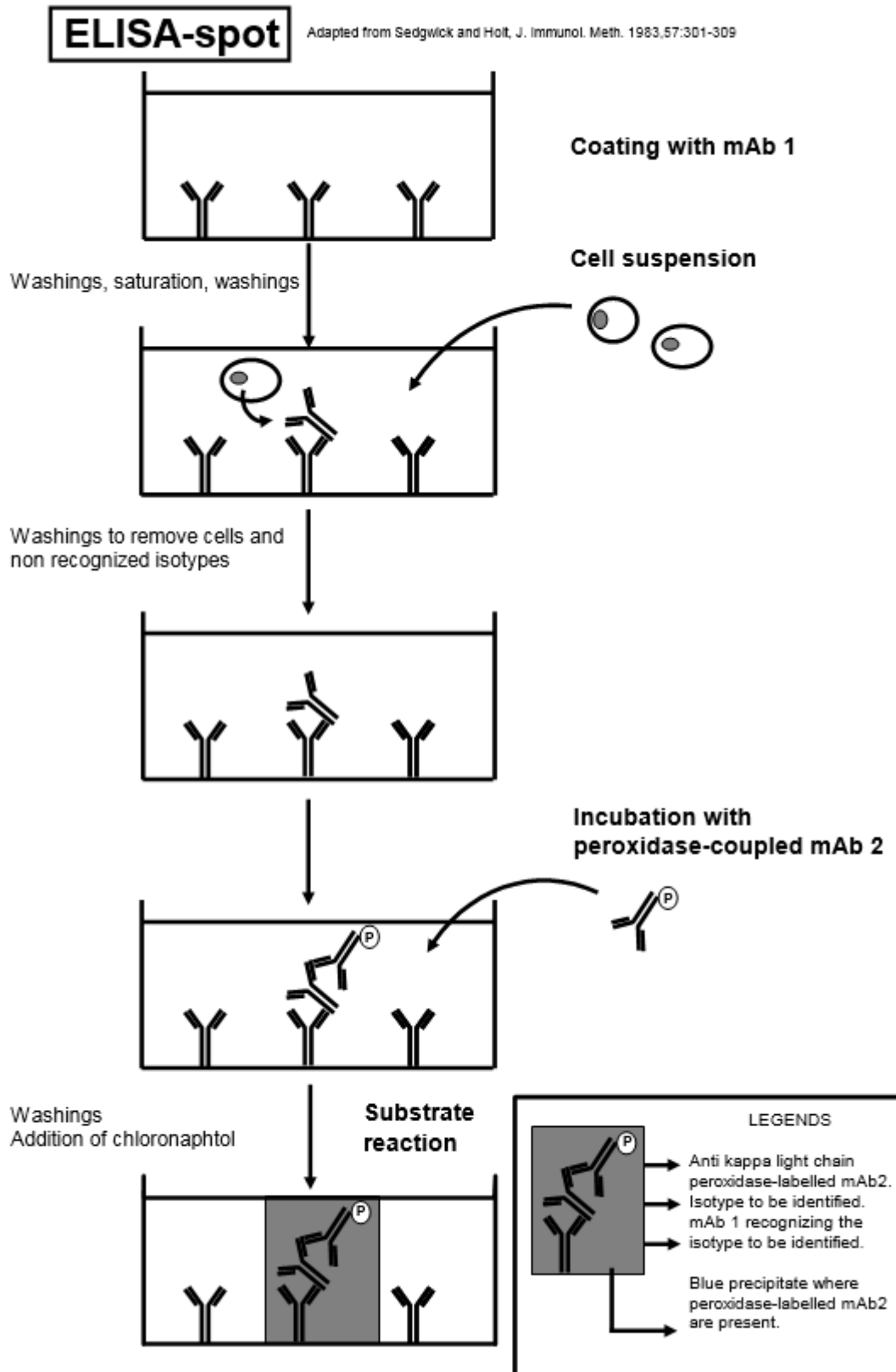
Immunocytoma immunoglobulin	Isotype	Antigen binding specificity
IR202 <sup>*(1)</sup>	IgM kappa	Unknown
IR473 <sup>-(1,8)</sup>	IgM kappa	Autoantibodies anti-rat $\gamma$ 1
IR22 <sup>*(1,2,3,4)</sup>	IgA kappa	Autoantibodies anti-rat $\gamma$ 1
IR1060 <sup>-(1,2,3,4)</sup>	IgA kappa	Unknown
IR2 <sup>-(2,4,5)</sup>	IgE kappa	Unknown
IR162 <sup>*(1,4,5)</sup>	IgE kappa	Unknown
IR595 <sup>-(7)</sup>	IgG1 kappa	Unknown
IR871 <sup>°</sup>	IgG1 kappa	Unknown
IR27 <sup>-(2,4)</sup>	IgG1 kappa	Unknown
IR31 <sup>*(2,6)</sup>	IgG1 lambda	Unknown
IR418 <sup>*(7,9)</sup>	IgG2a kappa	Unknown
IR452 <sup>°</sup>	IgG2a kappa	Unknown
IR863 <sup>*</sup>	IgG2b kappa	Unknown
IR304 <sup>°</sup>	IgG2c kappa	Unknown
IR1148 <sup>*</sup>	IgG2c kappa	Unknown

*\*Currently produced (short delay). °Produced upon request.*

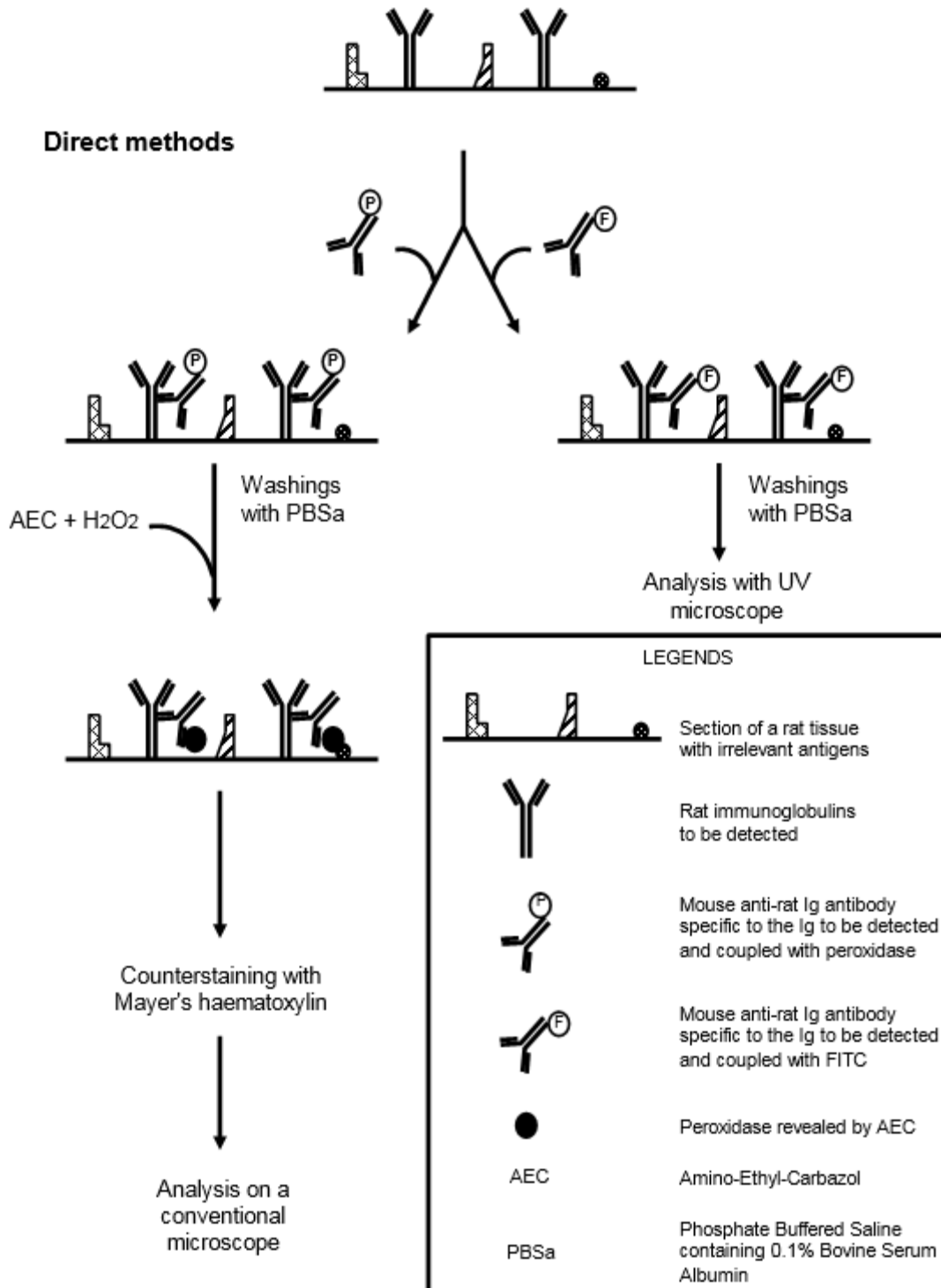
### References:

For all IR: Rat Hybridomas and Rat Monoclonal Antibodies, H. Bazin (Ed.), CRC Press, Boca Raton, Florida, USA, 1990, 515 pages; (1) J. Natl. Cancer Inst. 1973, 51: 1359; (2) Eur. J. Immunol. 1974, 4: 44; (3) J. Immunol. 1974, 112: 1035; (4) Immunology 1974, 26: 713; (5) Immunology 1993, 79: 580; (6) Immunochemistry 1973, 10: 653; (7) Transplantation 1993, 56: 1427; (8) Transplantation 1995, 60: 1350; (9) Eur. J. Immunol. 1995, 25: 1502.



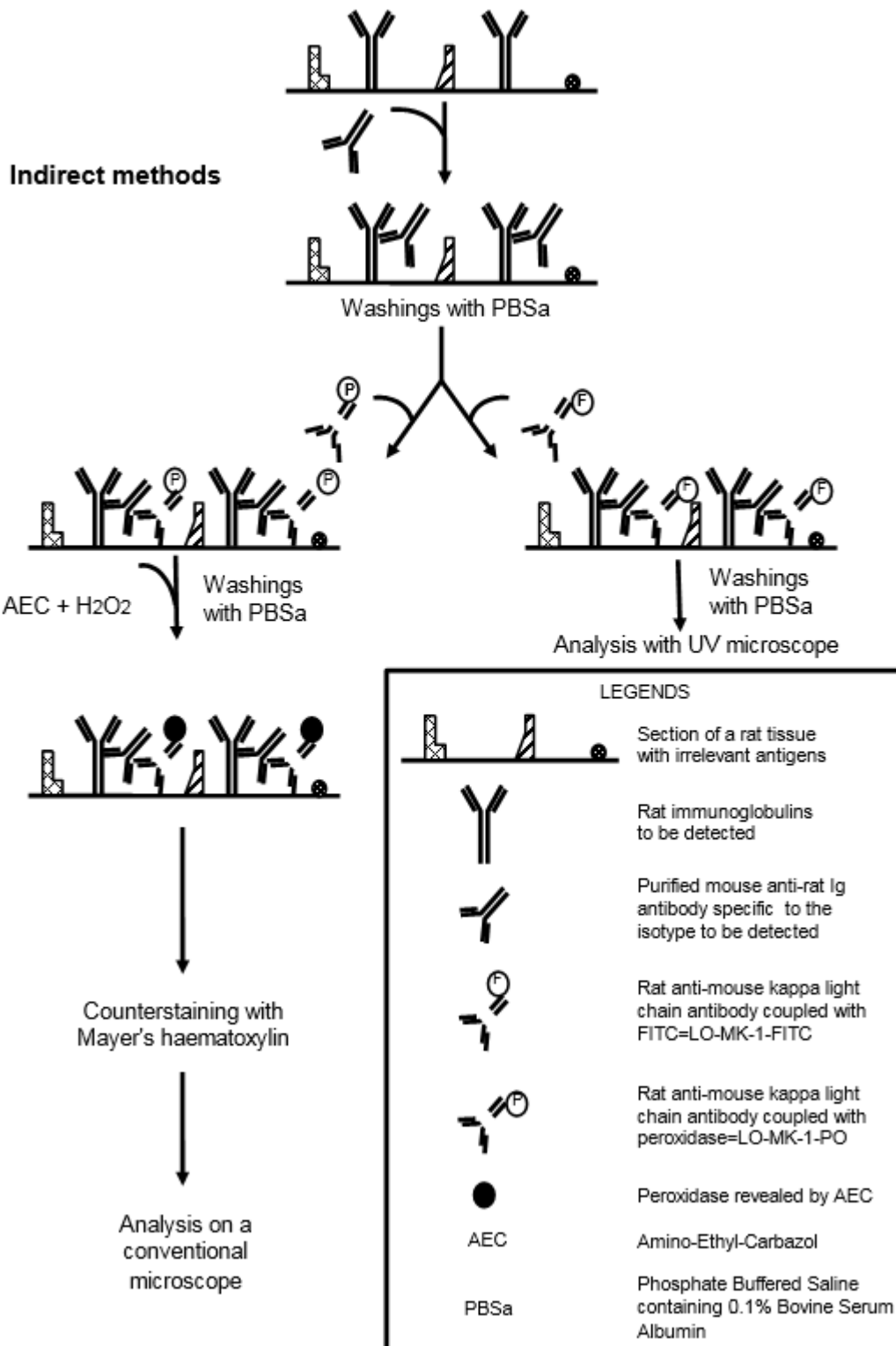


## Immunohistocalisation (1)



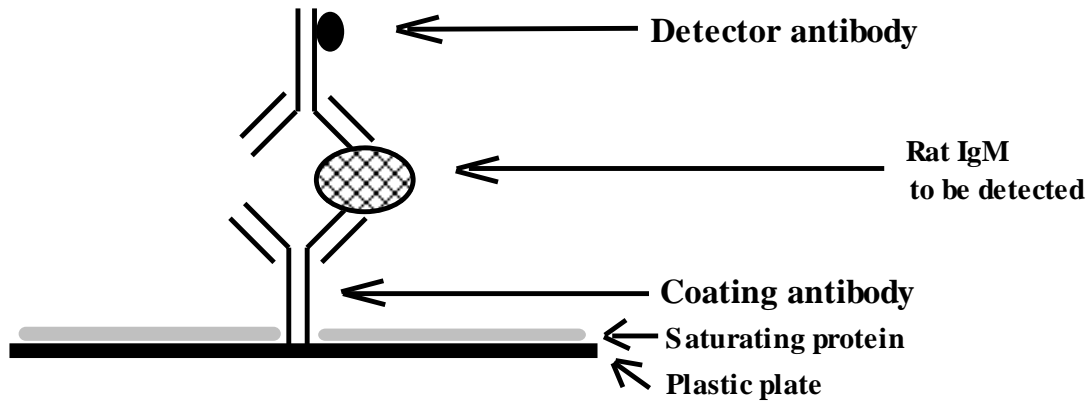


## Immunohistolocalisation (2)



## Detection and Quantification of RAT Ig

## Detection and Quantification of RAT IgM by ELISA



Sandwich ELISA assays			
	Option 1	Option 2	Option 3
Detector antibodies	MARK-1 + MARL-15	MARK-1 + MARL-15	MARM-4
Capture antibodies	MARM-4	MARM-7	MARM-7
Standards	IR473 or LO-DNP-34		

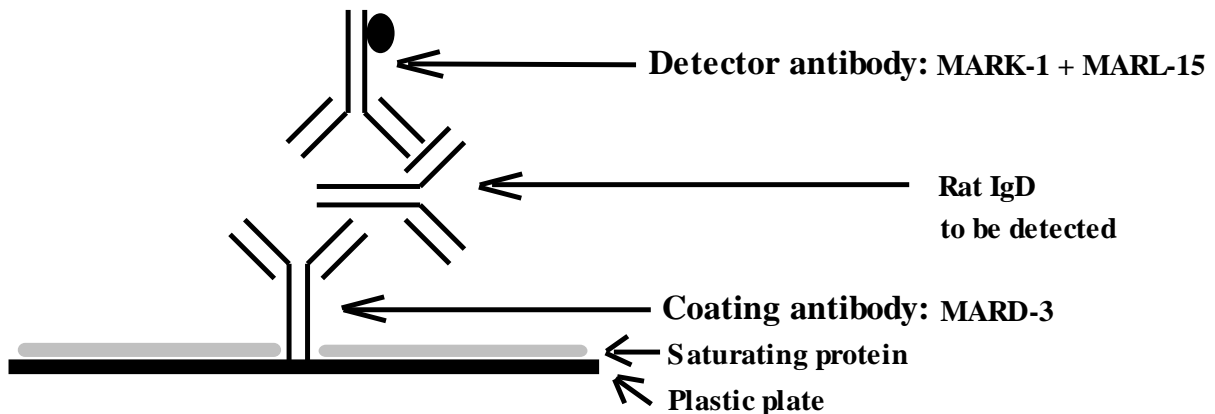
**Option 1 is recommended**

### Assay conditions

- **Coated antibody:** MARM-4 or MARM-7 at 5 µg/ml (in carbonate/bicarbonate buffer pH 9.5)
- **Saturating protein:** lyophilized skimmed milk or some other proteins
- **Detector antibody:** MARM-4 or MARK-1 + MARL-15 conjugated to peroxidase or biotin and then streptavidin-peroxidase (or any other detection system)
- **Normal range of detectable rat IgM concentrations in this assay:** 2 → 0.03 µg/ml

For each batch of monoclonal antibodies, all details of the ELISA controls are given in the quality control sheet.

## Detection and Quantification of RAT IgD by ELISA



- 
- MARD-3 and MARK-1 + MARL-15 can be used in Sandwich ELISA.
  - MARD-3 coats very well on plastic plate.
  - Standard: IR504.

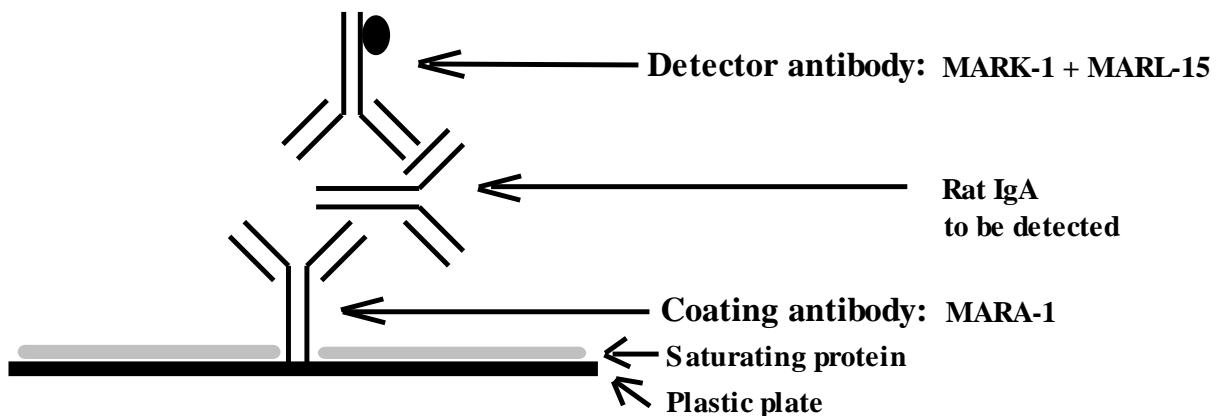
### Assay conditions

- **Coated antibody:** MARD-3 at 5 µg/ml (in carbonate/bicarbonate buffer pH 9.5)
- **Saturating protein:** lyophilized skimmed milk or some other proteins
- **Detector antibody:** MARK-1 + MARL-15 conjugated to peroxidase or biotin and then streptavidin-peroxidase (or any other detection system)
- **Normal range of detectable rat IgD concentrations in this assay:** 2→0.03 µg/ml

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For each batch of monoclonal antibodies, all details of the ELISA controls are given in the quality control sheet.

## Detection and Quantification of RAT IgA by ELISA



- 
- MARA-1 and MARK-1 + MARL-15 can be used in Sandwich ELISA.
  - MARA-1 coats very well on plastic plate.
  - Standards: IR22 or LO-DNP-45

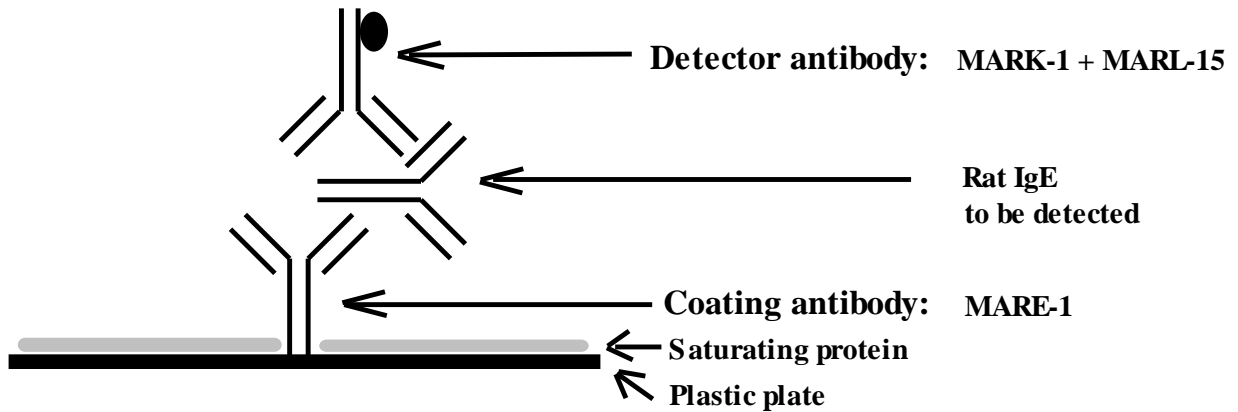
### Assay conditions

- **Coated antibody:** MARA-1 at 5 µg/ml (in carbonate/bicarbonate buffer pH 9.5)
- **Saturating protein:** lyophilized skimmed milk or some other proteins
- **Detector antibody:** MARK-1 + MARL-15 conjugated to peroxidase or biotin and then streptavidin-peroxidase (or any other detection system)
- **Normal range of detectable rat IgA concentrations in this assay:** 2→0.03 µg/ml

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For each batch of monoclonal antibodies, all details of the ELISA controls are given in the quality control sheet.

## Detection and Quantification of RAT IgE by ELISA



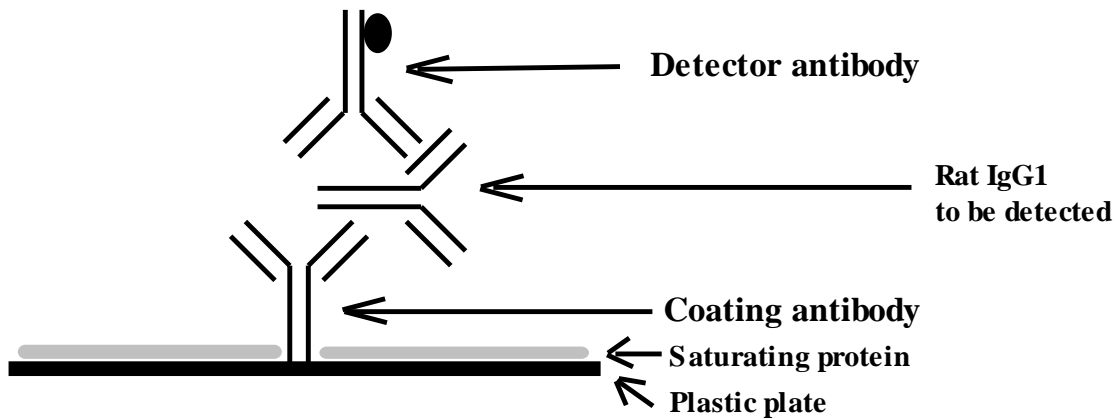
- 
- MARE-1 and MARK-1 + MARL-15 can be used in Sandwich ELISA.
  - MARE-1 coats very well on plastic plate.
  - Standards: IR2 or IR162 or LO-DNP-30
- 

### Assay conditions

- **Coated antibody:** MARE-1 at 5 µg/ml (in carbonate/bicarbonate buffer pH 9.5)
  - **Saturating protein:** lyophilized skimmed milk or some other proteins
  - **Detector antibody:** MARK-1 + MARL-15 conjugated to peroxidase or biotin and then streptavidin-peroxidase (or any other detection system)
  - **Normal range of detectable rat IgE concentrations in this assay:** 2→0.03 µg/ml
- 

For each batch of monoclonal antibodies, all details of the ELISA controls are given in the quality control sheet.

## Detection and Quantification of RAT IgG1 by ELISA



Sandwich ELISA assays			
	Option 1	Option 2	Option3
Detector antibodies	MARK-1 + MARL-15	MARK-1 + MARL-15	MARG1-2
Capture antibodies	MARG1-2	MARG1-1	MARG1-1
Standards	IR595 or LO-DNP-1 or LO-DNP-2		

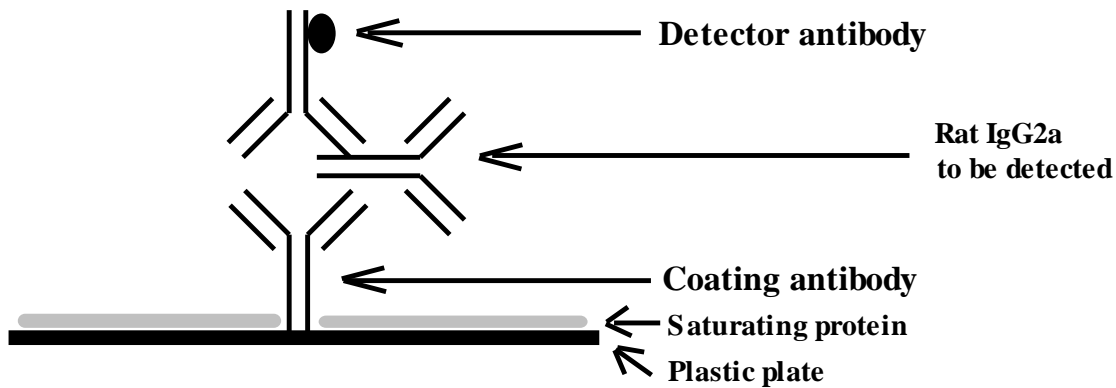
**Option 1 is recommended**

### Assay conditions

- **Coated antibody:** MARG1-2 or MARG1-1 at 5 µg/ml (in a carbonate/bicarbonate buffer pH 9.5)
- **Saturating protein:** lyophilized skimmed milk or some other proteins
- **Detector antibody:** MARG1-2 or MARK-1 + MARL-15 conjugated to peroxidase or biotin and then streptavidin-peroxidase (or any other detection system)
- **Normal range of detectable rat IgG1 concentrations with this assay:** 2→0.03µg/ml

For each batch of monoclonal antibodies, all details of the ELISA controls are given in the quality control sheet.

## Detection and Quantification of RAT IgG2a by ELISA



Sandwich ELISA assays		
	Option 1	Option 2
Detector antibodies	MARK-1 + MARL-15	MARG2a-1
Capture antibodies	MARG2a-7	MARGa-7
Standards	IR418 or LO-DNP-16	

**Option 1 is recommended**

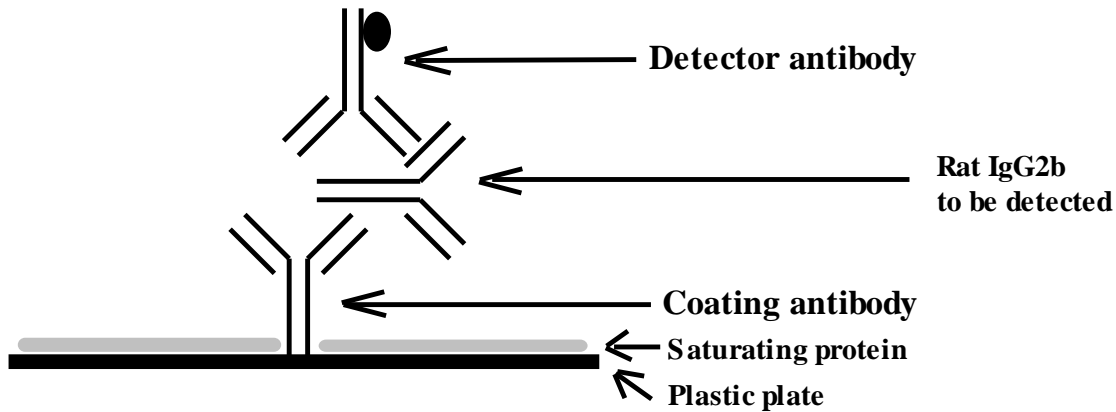
### Assay conditions

- **Coated antibody:** MARG2a-7 at 5 µg/ml (in carbonate/bicarbonate buffer pH 9.5)
- **Saturating protein:** lyophilized skimmed milk or some other proteins
- **Detector antibody:** MARG2a-1 or MARK-1 + MARL-15 conjugated to peroxidase or biotin and then streptavidin-peroxidase (or any other detection system)
- **Normal range of detectable rat IgG2a concentrations in this assay:** 2→0.03 µg/ml

For each batch of monoclonal antibodies, all details of the ELISA controls are given in the quality control sheet.



## Detection and Quantification of RAT IgG2b by ELISA



Sandwich ELISA assays		
	Option 1	Option 2
Detector antibodies	MARK-1 + MARL-15	MARG2b-8
Capture antibodies	MARG2b-3	MARG2b-3
Standards	IR863 or LO-DNP-57	

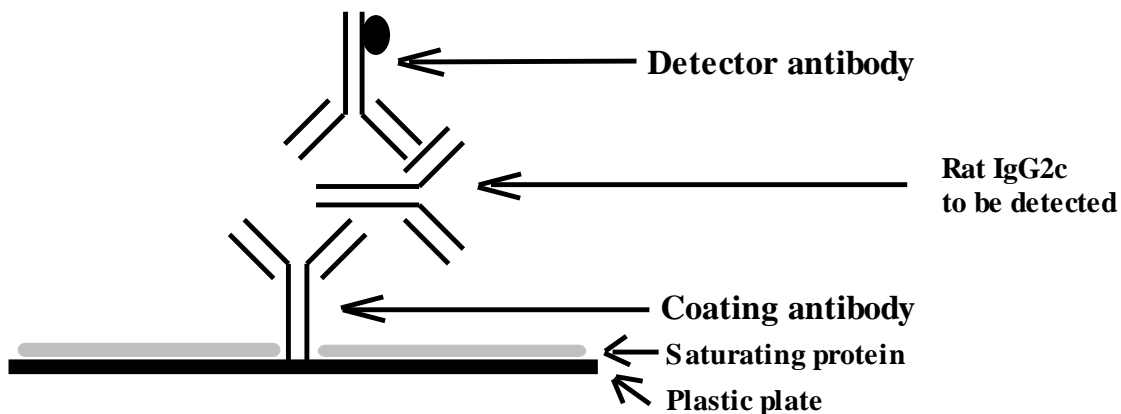
**Option 1 is recommended**

### Assay conditions

- **Coated antibody:** MARG2b-3 at 5 µg/ml (in carbonate/bicarbonate buffer pH 9.5)
- **Saturating protein:** lyophilized skimmed milk or some other proteins
- **Detector antibody:** MARG2b-8 or MARK-1 + MARL-15 conjugated to peroxidase or biotin and then streptavidin-peroxidase (or any other detection system)
- **Normal range of detectable rat IgG2b concentrations in this assay:** 2→0.03 µg/ml

For each batch of monoclonal antibodies, all details of the ELISA controls are given in the quality control sheet.

## Detection and Quantification of **RAT IgG2c** by ELISA



Sandwich ELISA assays		
	Option 1	Option 2
Detector antibodies	MARK-1 + MARL-15	MARG2c-3
Capture antibodies	MARG2c-5	MARG2c-5
Standards	IR304 or IR1148	

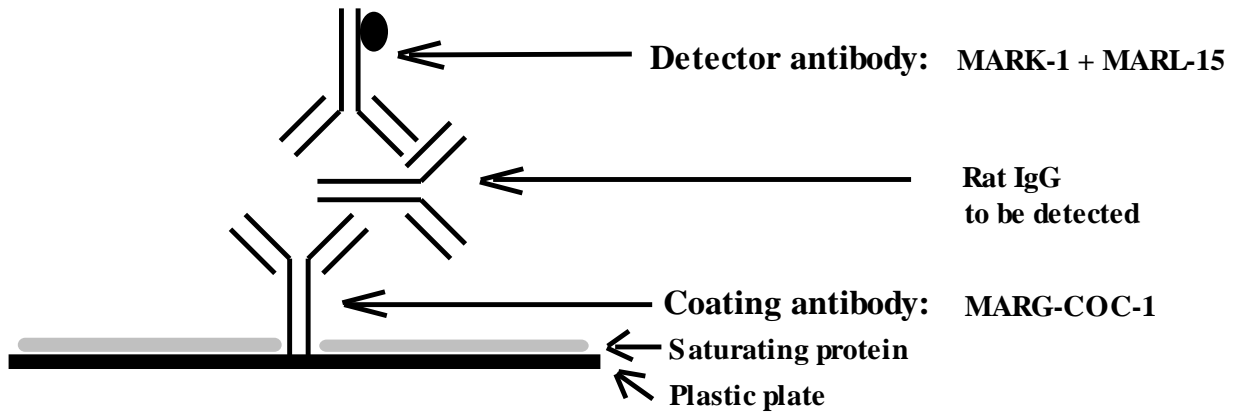
**Option 1 is recommended**

### Assay conditions

- **Coated antibody:** MARG2c-5 at 5 µg/ml (in carbonate/bicarbonate buffer pH 9.5)
- **Saturating protein:** lyophilized skimmed milk or some other proteins
- **Detector antibody:** MARG2c-3 or MARK-1 + MARL-15 conjugated to peroxidase or biotin and then streptavidin-peroxidase (or any other detection System)
- **Normal range of detectable rat IgG2c concentrations in this assay:** 2→0.03 µg/ml

For each batch of monoclonal antibodies, all details of the ELISA controls are given in the quality control sheet.

## Detection and Quantification of RAT IgG by ELISA



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- MARK-1 + MARL-15 can be used in Sandwich ELISA.
  - MARG-COC-1 (pool of MARG1-2, MARG2a-7, MARG2b-3, MARG2c-5) coats very well on plastic plate.
- 

### Assay conditions

- **Coated antibody:** MARG-COC-1 at 5 µg/ml (in carbonate/bicarbonate buffer pH 9.5)
  - **Saturating protein:** lyophilized skimmed milk or some other proteins
  - **Detector antibody:** MARK-1 + MARL-15 conjugated to peroxidase or biotin and then streptavidin-peroxidase (or any other detection system)
- 

For each batch of monoclonal antibodies, all details of the ELISA controls are given in the quality control sheet.

Example

Rat IgG2a concentration

