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Inspiration for Life Science

POLYCLONAL ANTIBODY

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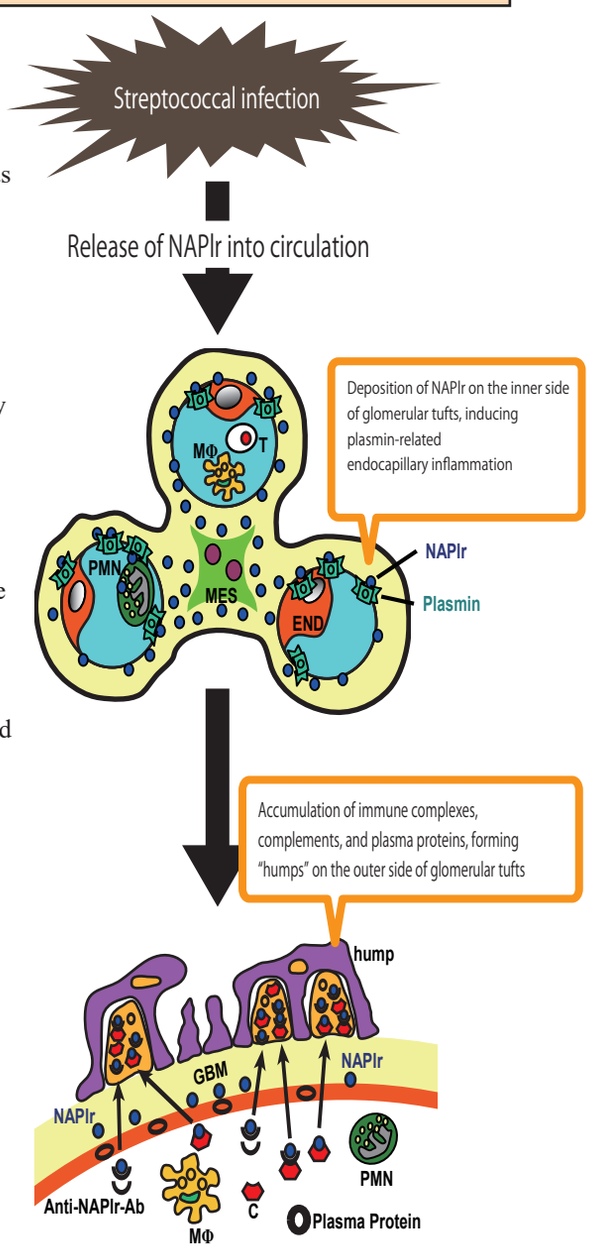
Catalog No. TMU-PA001, TMU-PA002

Anti Nephritis-Associated Plasmin receptor [NAPlr] FITC conjugated

Background：

Acute post-streptococcal glomerulonephritis (APSGN) is the well known representative disease of glomerulonephritis triggered by infection (Reference 1). Nephritis-Associated Plasmin receptor (NAPlr) is the nephritis inducing factor that has been identified from intracellular component of hemolytic streptococcus. Glomerular NAPlr deposition is frequently found in infection-related glomerulonephritis (IRGN), especially in glomerulonephritis that is triggered by streptococcal infection (i.e. streptococcal-infection related nephritis [SIRN]), but is not found in non-infected nephritis. Therefore, tissue staining using anti-NAPlr antibody will be ideal to identify IRGN and SIRN (References 2-5). As the anti-NAPlr antibody, there has been a commercially available monoclonal antibody (1F10), however it is claimed to have a problem of low sensitivity in its use for tissue staining; analysis using anti-NAPlr rabbit polyclonal antibody still remains as the standard method. On the other hand, the staining sensitivity is better in polyclonal anti-NAPlr antibody, however stable generation & supply of it is difficult because of the complicated step of NAPlr extraction from streptococcal particles. To balance both satisfactory tissue staining and stable antibody generation, this polyclonal antibody against NAPlr peptide has been established.

Applications:	Tissue Staining (1:5 dilution)
Specificity:	Nephritis-associated plasmin receptor (NAPlr) peptide
Immunogen:	synthetic peptide of NAPlr (a.a. 73-87)
Host:	Rabbit
Reactivity:	Binds with NAPlr (streptococcal GAPDH)
Clonality:	Polyclonal
Subclass:	IgG
Purification method:	Purified by Protein G sepharose 4 Fast Flow column
Form:	Liquid (PBS), 0.09% Sodium Azide (NaN3) added
Conjugation:	Fluorescein Isothiocyanate (FITC)
Volume:	50 ug (TMU-PA002), 100 ug (TMU-PA001)
Concentration:	1.3 mg/mL
Storage condition:	-70℃



Schematic representation of proposed mechanisms involved in the development of APSGN. MES: mesangial cell; END: endothelial cell; PMN: polymorphonuclear cell; MΦ: macrophage; T: T lymphocyte; GBM: glomerular basement membrane; C: complement; Anti-NAPlr-Ab: Anti-NAPlr-antibody.

Example Assay Data:

1. Tissue Staining

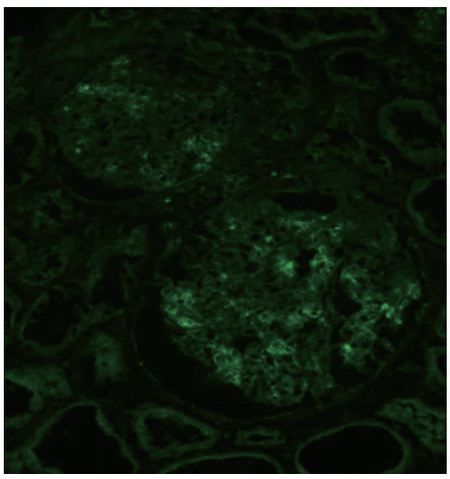


Figure 1. Tissue Staining result of anti NAPlr-FITC primary antibody

Primary Antibody: anti NAPlr-FITC, 1:5 dilution [0.26 mg/mL])

Tissue: Section of unfixed frozen renal biopsy tissue from an APSGN patient (positive control)

1. Air dry unfixed renal biopsy frozen section(s)
2. Wash with PBS (3 min each x 2 times)
3. 1 hour ambient temperature incubation with Primary Antibody (anti NAPlr-FITC, 1:5 dilution [0.26 mg/mL])
4. Wash with PBS (5 min each x 3 times)
5. After mounting with the mounting medium for fluorescent staining, observe the section by fluorescent microscope

References:

1: Oda T, Up-to-date findings on infection-related glomerulonephritis. 東医大誌 73（4）：355-363, 2015

2: Yoshizawa N, Yamakami K, Fujino M, et al. Nephritis-associated plasmin receptor and acute poststreptococcal glomerulonephritis. J Am Soc Nephrol. 15: 1785-93, 2004

3: Oda T, Yamakami K, Yoshizawa N, et al. Glomerular plasmin-like activity in relation to nephritis-associated plasmin receptor in acute poststreptococcal glomerulonephritis. J Am Soc Nephrol. 16:247-54, 2005

4: Oda T, Yoshizawa N, Yamakami K, et al. Localization of nephritis-associated plasmin receptor in acute poststreptococcal glomerulonephritis. Hum Pathol. 2010; 41(9):1276-85.

5: Oda T, Yoshizawa N, Yamakami K, et al. The role of nephritis-associated plasmin receptor (NAPlr) in glomerulonephritis associated with streptococcal infection. J Biomed Biotechnol. 2012;2012:417675.

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