Monoclonal antibodies against human Plasminogen
Product Nos. ADG3641, ADG3642, ADG3644, and ADG3647

Description
Full length Plasminogen comprises seven domains, a C-terminal chymotrypsin-like serine protease domain, a N-terminal Pan Apple domain (PAp) and five Kringle domains (KR 1-5). Plasminogen is synthesised in the liver and circulates in two forms: Glu-Plasminogen and Lys-Plasminogen. In its native form Plg contains a glutamic acid residue at the N-terminus and this molecule is termed Glu-Plasminogen. Native Glu-Plasminogen (88 KDa) is readily converted to Lys-plasminogen (83 KDa) by Plasmin hydrolysis of the Lys76-Lys77 peptide bond. PMN-Elastase catalyzed cleavage of the Val441-Val442 peptide bond of plasminogen yields a functionally active zymogen termed Val-442-Plasminogen or mini-Plasminogen, which contains Kringle 5 and the proteolytic domain.

Properties
The monoclonal antibodies were generated against purified human Plasminogen. The antibodies have been purified from murine ascites by Protein A affinity chromatography.

ADG3641
This antibody (clone PG1, isotype IgG1) appears to be mono-specific for human Glu-Plasminogen and Glu-Plasmin both free and complexed with the inhibitor, alpha-2-antiplasmin as demonstrated by immunoblotting. The epitope specificity appears to reside in the (glu1-lys76) Plasmin cleavage peptide region. The antibody does not react with Lys-Plasminogen or Lys-Plasmin.

ADG3642
This antibody (clone PG2, isotype IgG1) reacts with both Glu- and Lys-Plasminogen and with Plasmin / alpha-2-antiplasmin complexes. The antibody is directed against an epitope on the Kringle 1-3 elastase fragment of plasminogen. It does not affect plasmin cleavage of SPECTROZYME PL.

ADG3644
This antibody (clone PG4, isotype IgG1) is selective for “mini-plasminogen” as demonstrated by immunoblotting; the antibody shows no reaction with Kringle 1-3 or Kringle 4 fragments and reacts only with un-complexed plasminogen and plasmin. (2) The antibody has been used successfully in an ELISA for “mini-plasminogen”. (3)

ADG3647
This antibody (clone PG7, isotype IgG1) reacts with free plasminogen and plasmin in alpha-2-antiplasmin complexes, as determined per Elisa. The antibody is directed against an epitope on the kringle 4 elastase fragment of plasminogen. (1)

Summary

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<thead>
<tr>
<th></th>
<th>ADG3641</th>
<th>ADG3642</th>
<th>ADG3644</th>
<th>ADG3647</th>
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<tbody>
<tr>
<td>Binding to Plasminogen</td>
<td>Glu-Plg</td>
<td>KR 1-3</td>
<td>Mini-Plg</td>
<td>KR 4</td>
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<tr>
<td>Binding to Plasmin-alpha2-antiplasmin complex</td>
<td>+</td>
<td>+</td>
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<td>Half-maximal binding to coated Plasminogen</td>
<td>6.0 ng/mL</td>
<td>10.0 ng/mL</td>
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<td>Inhibition of Plasminogen activation</td>
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<td>Competitive</td>
<td>KR 1-4 nM</td>
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<td>Stimulation of Plasminogen activation</td>
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<td>+</td>
<td>-</td>
<td>+</td>
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Presentation
Vials containing 0.5 mg IgG, lyophilized from 0.01 M potassium phosphate, 0.14 M sodium chloride with 0.02% sodium azide and 20 mg/ml mannitol added.

Reconstitution
Add 0.5 mL filtered deionized water to generate a 1.0 mg/mL stock solution.

Storage and Stability
Store lyophilized antibodies at 2°-8°C. Aliquot and store reconstituted antibodies at -20°C or colder. It is recommended to avoid freeze-thaw cycles.

References