Caution

For patients undergoing treatment with angiotensin-converting enzyme (ACE) inhibitor, there is a possibility that treatment with the IMMUSORBÀ PH-350 will lead to a drop in blood pressure. Simultaneous treatment with ACE inhibitor and the IMMUSORBÀ PH-350 must be avoided.

The IMMUSORBÀ PH-350 is indicated for the treatment of plasma. Never run whole blood through the IMMUSORBÀ PH-350 and may cause blockage. Do not use the IMMUSORBÀ PH-350 with plasma containing a large amount of thrombocytes.

References

- Reviews of the product

- Reviews in clinical use
  4. Yamazaki, Extracorporeal immunoadsorption, Therapeutic Plasmapheresis J 113-121, 1986

- Preclinical & Development
  1. Yamazaki et al., Extracorporeal immunoadsorption using IM-PH or IM-TR column, Biomedical Artif Cells Artif Organs, 17:117-124, 1989

- Application to SLE
  1. Huang et al. Rapid reduction of antibodies and improvement of disease activity by immunoadsorption in Chinese patients with severe systemic lupus erythematosus, Clin Rheumatol, 30:221-6, 2011
  2. Loo et al. Immunoadsorption and plasmapheresis are equally efficacious as adjuvant therapies for severe lupus nephritis, Transfus Apher Sci, 43:335-60, 2010,
  4. Sugiura et al. Immunoadsorption plasmapheresis using a phenylaluminate column as an effective treatment for lupus nephritis, Ther Apher Dial, 10:185-91, 2006,
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- Application to RA
  3. Okuda et al. Plasmapheresis treatment in autoimmune disease levels. Therapeutic Plasmapheresis (IV) 133-142, 1994

- Other applications
  3. Aimoto et al. Plasmapheresis Therapy in Progressive Systemic Sclerosis, Therapeutic Plasmapheresis (VIII) 97-100, 1999
Selective immunoabsorption for autoimmune diseases with easy to handle single use column

**Indication**
Autoimmune diseases (e.g., Systemic lupus erythematosus (SLE), Malignant rheumatoid arthritis (MRA), Guillain-Barré syndrome (GBS), Chronic inflammatory demyelinating polyneuropathy (CIDP), Multiple sclerosis (MS))

**Features of IMMUSORBA PH-350(L)**
- Therapeutic plasmapheresis by removing pathogenic substances from patient’s plasma by selective adsorption.
- No need for the replacement of plasma, minimizing the risk of infection with hepatitis, AIDS, etc.
- Applicable to patients with protein allergy.

**Clinical Course**
- Changes in creatinine clearance. (*P<0.05 vs. baseline).

**Circuit Diagram**

**Specifications**

<table>
<thead>
<tr>
<th>Immunoabsorption Column</th>
<th>Adsorbent</th>
<th>Material</th>
<th>Volume</th>
<th>350mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priming Volume</td>
<td>350mL</td>
<td>Polyelectrolyte</td>
<td>450g</td>
<td></td>
</tr>
<tr>
<td>Container</td>
<td>500mL</td>
<td>Polypropylene</td>
<td>0.87m</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>650g</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sterilization</td>
<td>High pressure steam</td>
<td></td>
<td>30m</td>
<td></td>
</tr>
</tbody>
</table>

| Microparticle Filter    | Material           | Polyethylene diisocyanate     | Area   | 0.87m |
|                        |                    | (coated with hydroxyethylcellulose) |       |       |
| Container              | Poly (vinyl chloride) |                               | 30m    |       |
| Sterilization          | Ethylene oxide     |                               | 30m    |       |
Caution
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References
[Reviews of the product]
3) Yoshida et al, IMMUSORBA TR and IMMUSORBA PHI: basics of design and features of functions, Ther Apher, 4:121-134, 2000

[Reviews in clinical use]
1) Yamaji, Immunosorption for collagen and rheumatic diseases, Transfus Apher Sci, 35:666-70, 2017
2) Yang et al, Plasma adsorption in critical-care, Ther Apher, 6:164-168, 2002
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[Pre-clinical & Development]
1) Yamazaki et al, Extracorporeal immunoadsorption with IM-PHI or IM-TR column, Biomater Artif Cells Artif Organs, 17:117-124, 1989

[Application to SLE]
2) Lu et al, Immunoadsorption and plasmapheresis are equally efficacious as adjunctive therapies for severe lupus nephritis, Transfus Apher Sci, 42:335-40, 2010
4) Sugimoto et al, Immunoadsorption plasmapheresis using a phenylalanine column as an effective treatment for lupus nephritis, Ther Apher Dial, 18:183-92, 2006
8) Sagawa et al, Significance of Immunoadsorption Therapy in Patients with Systemic Lupus Erythematosus: Analysis of Serum Autoantibody and Immune Complexes by a Noninvasive Flowing Column, Therapeutic Plasmapheresis (X) 5:65-77, 1990

[Application to RA]
2) Kobayashi et al, Plasma Clearing Using Immunoadsorbent IMP for Patients with Rheumatoid Arthritis, Therapeutic Plasmapheresis (IV) 152-157, 1994
3) Okuda et al, Effect of immunoadsorber treatment on auto-antibody levels, Therapeutic Plasmapheresis (IV) 149-152, 1994

[Other applications]
3) Arinami et al, Plasmapheresis Therapy in Progressive Systemic Sclerosis, Therapeutic Plasmapheresis (VIII) 97-100, 1989