

IMMUSORBA™

# TR-350(L)

*Immunoabsorption Column*



***Treatment for Immune  
neurological diseases***

# Selective immunoadsorption for neurological diseases with easy to handle single use column

## Indication

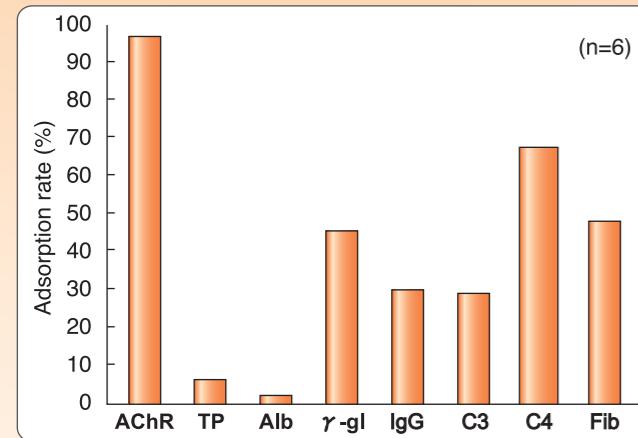
### Neurological diseases

(e.g., Myasthenia gravis (MG), Guillain-Barré syndrome (GBS), Chronic inflammatory demyelinating polyneuropathy (CIDP), Multiple sclerosis (MS))

## Features of IMMUSORBA TR-350(L)

- Therapeutic plasmapheresis by removing pathogenic substances (anti-acetylcholine receptor antibodies and immune complexes) 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.

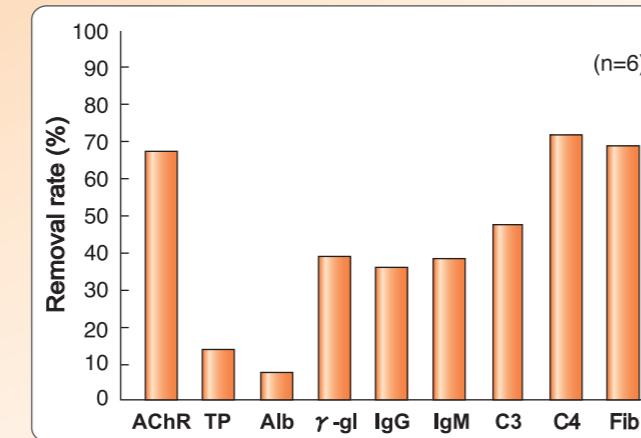
### IMMUSORBA TR-350 selectively adsorbed anti-AChR antibodies (*in vivo*)



Plasma samples were collected at the inlet and outlet of the column when 1L plasma was treated.

Shibuya et al. [Article in Japanese] Chiryo 66:49-55, 1984

### Removal rate of plasma components from patient (*in vivo*)

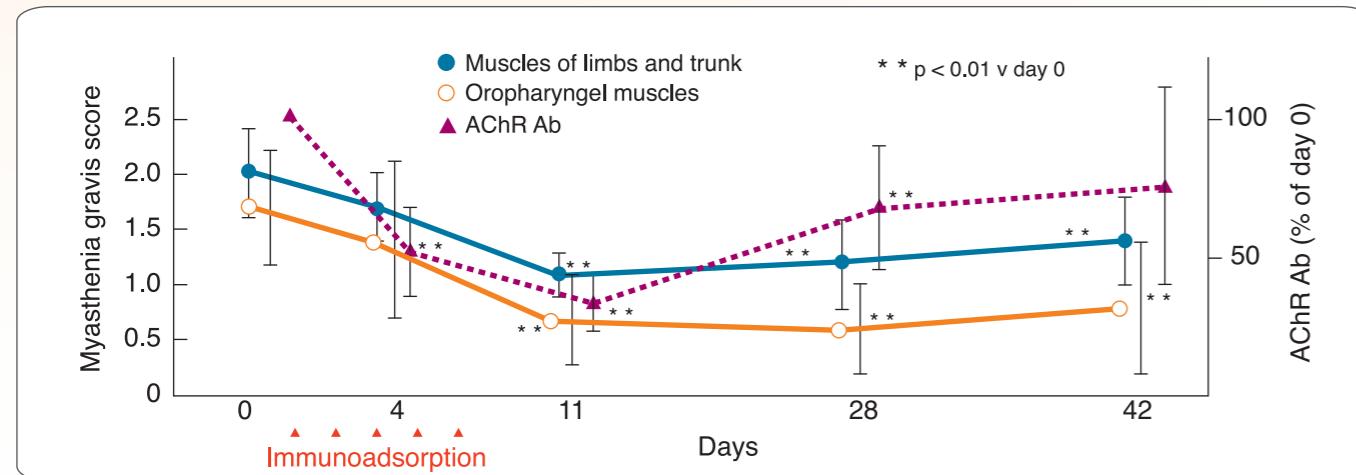


Blood samples for removal rate were collected before and after treatment. Treated plasma volume: 2L

Shibuya et al. Current Practice in Therapeutic Plasmapheresis 166-172, 1985

## Clinical Course

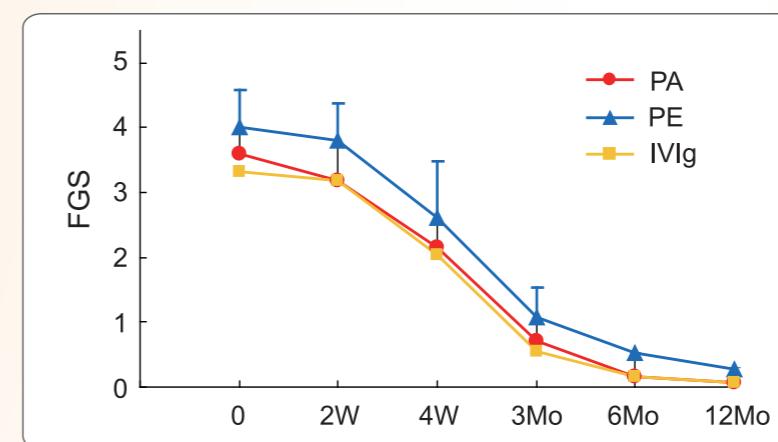
### Efficacy of immunoadsorption for patient with Myasthenia gravis (MG)



Mean values of myasthenia gravis score and titer of AChR antibodies in the 11 improved patients after immunoadsorption therapy. Consecutive immunoadsorption treatments induced a significant fall of the myasthenia gravis score and a decrease in the titer of AChR antibodies. The myasthenia gravis score remained low even on day 42 despite the rise in AChR antibody titers.

Shibuya et al. J Neurol Neurosurg Psychiatry 57:578-581, 1994

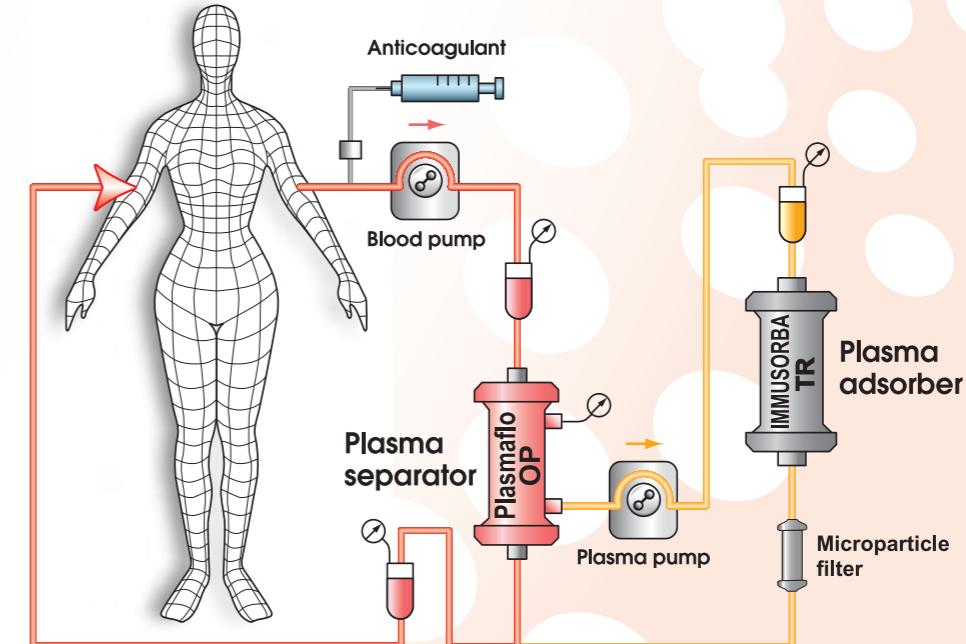
### Progressive changes of the functional grading scale (FGS) in PA, PE, and IVIg treatment groups



Seta et al. Clin Neurol Neurosurg. 107:491-6, 2005.

Sixty-three Guillain-Barré Syndrome (GBS) patients were enrolled. These patients were treated with plasma adsorption (PA, n=39: IMMUSORBA TR-350), plasma exchange (PE, n=14), or immunoglobulin treatment (IVIg, n=10). Treatment methods (PA, PE, or IVIg) did not significantly influence the outcome. Since PA does not result in a risk of unknown infection, choosing a PA may be justified.

## Circuit Diagram



## Specifications

Immunoabsorption Column	Adsorbent	Material	Tryptophan immobilized polyvinylalcohol gel
	Volume	350mL	
	Container	Material	300mL
		Dimension	Polypropylene
	Weight		211mm [L] x 62mm [D]
Microparticle Filter	Filter	Material	650g
		Area	Polyethylene (coated with ethylene-vinylalcohol copolymer)
	Container	Material	0.07m <sup>2</sup>
		Dimension	Poly (vinyl chloride)
	Priming Volume		165mm [L] x 22mm [D]
	Sterilization		30mL
	Filter	Material	High pressure steam
	Area		Ethylene oxide
	Container	Material	
	Dimension		

# Caution

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

The IMMUSORBA TR-350 is intended for the treatment of plasma. Never run whole blood through the IMMUSORBA TR-350. Thrombocytes cannot pass through the IMMUSORBA TR-350 and may cause blockage. Do not use the IMMUSORBA TR-350 with plasma containing a large amount of thrombocytes.

## References

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### 【Reviews in clinical use】

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- 3) Yamazaki. Extracorporeal immunoabsorption. *Therapeutic Plasmapheresis VI* 113-121, 1986

### 【Pre-clinical & Development】

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### 【Application to MG】

- 1) Nagane et al. Early aggressive treatment strategy against myasthenia gravis. *Eur Neurol.* 65:16-22, 2011.
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