

EndoTrap® blue (formerly simply EndoTrap® called) is extended with EndoTrap® red to the EndoTrap®-family in order to increase the application possibilities (larger range of buffers) for your experiments.

Introduction

EndoTrap® is an affinity matrix for the efficient removal of bacterial endotoxins from solutions. EndoTrap® can be employed both in batch or chromatography mode. EndoTrap® has been developed for the removal of endotoxins from aqueous solutions containing low or high molecular weight substances. Frequently, endotoxin removal from protein solutions is insufficient with standard methods including ultrafiltration, ion exchange chromatography, or two phase extraction.

We refined EndoTrap® to the EndoTrap®-family, so that you can choose a specialized product for your desired applications. EndoTrap® blue and EndoTrap® red have similar characteristics to remove endotoxin. The products are different basically in their buffer compatibilities.

Following tables give a short overview of the differences of both EndoTrap® systems. For detailed information please read our FAQ's for EndoTrap® blue and EndoTrap® red.

The most important differences between both EndoTrap®-family products - ... to choose the right product for your desired application:

| | EndoTrap® blue | EndoTrap® red |
|--|---|-------------------|
| ▪ Customer specific equilibration buffer have to enriched with calcium | Yes | No |
| ▪ PBS can be used as equilibration buffer | only when enriched freshly with 50-100 µM Ca ²⁺ !* | Yes |
| ▪ suitable with EDTA, and other Calcium chelators containing buffers | No | Yes |
| ▪ Ionic strength | up to 600 mM NaCl | up to 250 mM NaCl |
| ▪ pH (buffer) | pH 4-9 | pH 6-9 |
| ▪ endotoxin starting contamination well under 10 EU/ml | + | +++ |

* Further information for the preparation of buffers for EndoTrap blue you find in the FAQ for EndoTrap blue on page 9 "proteins, medium and buffers".

Comparison of the specifications of EndoTrap® blue and EndoTrap® red:

| | EndoTrap® blue | EndoTrap® red |
|---|---|---|
| Regeneration buffer (included) | Regeneration buffer "blue" ("HEPES-buffer", pH 7.5) (endotoxin concentration < 0.02 EU/ml) | Regeneration buffer "red" ("PBS-buffer", pH7.4) (endotoxin concentration < 0.02 EU/ml) |
| Equilibration buffer (included) | Equilibration buffer "blue" ("HEPES-buffer", pH 7.5 enriched with 0.1 mM CaCl ₂ ,) (endotoxin concentration < 0.02 EU/ml) | Equilibration buffer "red" ("PBS-buffer", pH 7.4) (endotoxin concentration < 0.02 EU/ml) |
| If you want to use your own buffer for equilibration (instead of the kit included equilibration buffer) | We tested EndoTrap blue successful with HEPES, BORATE, TRIS, MOPS, MES, PIPES (binding of EndoTrap blue to LPS depends on Calcium, therefore you have to add 50-100 µM Ca ²⁺ to your buffers!) | We tested EndoTrap red successful with PBS, HEPES, BORATE, TRIS, MOPS, MES, PIPES, Citrate-, Acetate-, Glycine- and Carbonate-buffers |
| Tested type of substance which can be applied onto the column | <ul style="list-style-type: none"> ▪ proteins ▪ peptides ▪ antibodies ▪ plasmid DNA | <ul style="list-style-type: none"> ▪ proteins ▪ peptides ▪ antibodies |
| pI of applied proteins | pI from 5-9 | pI from 5-9 |
| pH (buffer) | pH 4-9 | pH 6-9 |
| Ionic strength | up to 600 mM NaCl | up to 250 mM NaCl |
| Chaotropic substances | up to 2 M urea (pH 7) | not tested |
| Recommended working concentration of applied substances | 1-10 mg/ml | 1-10 mg/ml |

| | | |
|---|--|---|
| Recommended sample volume | up to 50 ml | up to 50 ml |
| Tested substances which interfere with the performance of Endo-Trap and have therefore an inhibitory effect for the binding to LPS | <ul style="list-style-type: none"> ▪ 10 mM NaOH ▪ 2 M urea at neutral pH ▪ SDS and other detergents ▪ Citrate ▪ ETDA, and other Calcium chelators (EGTA, HEDTA, NTA) | <ul style="list-style-type: none"> ▪ SDS and other detergents |
| Tested substances which do not interfere with the performance of EndoTrap | up to 10 mM DTT (Dithiothreitol) | not tested |
| Tested kinds of LPS (bacteria strain) | <ul style="list-style-type: none"> ▪ Escherichia coli, K12, R1, R2, R3, R4 ▪ Salmonella enterica ▪ Citrobacter freundii ▪ Citrobacter amalonaticus ▪ Citrobacter koseri ▪ Pseudomonas aeruginosa ▪ Pseudomonas stutzeri ▪ Enterobacter aerogenes ▪ Enterobacter asburiae ▪ Enterobacter cloacae ▪ Aeromonas hydrophilia | <ul style="list-style-type: none"> ▪ Escherichia coli, K12 ▪ Salmonella enterica ▪ Citrobacter freundii ▪ Pseudomonas aeruginosa <i>for</i> ▪ Klebsiella pneumoniae ▪ Serratia marcescens <i>we recommend EndoTrap red!</i> |
| [for detail information please read our FAQ 's] | | |

What are the specifications of the EndoTrap®-family?

| | |
|-----------------------|---|
| Ligand | EndoTrap blue or red respectively |
| Binding capacity | 2.000.000 EU/ml resin |
| Support matrix | Highly cross-linked 4% agarose, spherical beads |
| Void volume | 0.3 to 0.5 ml |
| Mean particle size | 90 µm |
| Storage | At 4 °C in regeneration buffer (RB blue or RB red) supplemented with 0.02% sodium azide |
| Max. flow rate | 1 ml/min |
| pH (buffer) | EndoTrap blue: 4-9 EndoTrap red: 6-9 |
| Temperature stability | Regular use in range between 4 °C and room temp. |
| Shelf live | 12 months |

Our related products from the EndoTrap® - family:

| Product | Contents | EndoTrap blue Cat. No. | EndoTrap red Cat. No. |
|---------------|--|---------------------------|--------------------------|
| EndoTrap 1/1 | 1 x 1 ml column, ready to use, equilibration buffer, regeneration buffer | 311053 | 321053 |
| EndoTrap 5/1 | 5 x 1 ml columns, ready to use, equilibration buffer, regeneration buffer | 311063 | 321063 |
| EndoTrap 10 | 10 ml settled resin, supplied as 50% slurry in regeneration buffer; equilibration buffer, regeneration buffer | 311064 | 321064 |
| EndoTrap 50 | 50 ml settled resin, supplied as 50% slurry in regeneration buffer; equilibration buffer, regeneration buffer | 311075 | 321075 |
| EndoTrap 100 | 100 ml settled resin, supplied as 50% slurry in regeneration buffer; equilibration buffer, regeneration buffer | 311065 | 321065 |
| EndoTrap Bulk | Bulk resin for industrial applications | 311066 | 321066 |

For inquiries and technical support please contact:
 profos ag, Josef-Engert-Str. 9, 93053 Regensburg, Germany
 Fon: +49 (0)941 942 62 0, Fax: +49 (0)941 942 62 20, e-Mail: inquiry@profos.de

If you liked to learn more about our products and services, please visit our homepage www.profos.de.