

TSKgel SuperSW mAb HR, TSKgel SuperSW mAb HTP and TSKgel UltraSW Aggregate

TSKgel
PRODUCT OVERVIEW

Size Exclusion Columns for Monoclonal Antibody Analysis

Introduction

Monoclonal antibodies (mAb) are monospecific antibodies that are made by identical immune cells that are clones of a unique parent cell. The TSKgel SW mAb columns meet the growing demand for the higher resolution and high throughput separation of mAb monomer and dimer/fragment, as well as higher resolution of mAb aggregates. These silica based size exclusion columns utilize a unique pore-controlled technology which produces a shallow calibration curve in the molar mass region of a typical monoclonal antibody, resulting in high resolution separations.

TSKgel SW mAb columns by application:

High resolution analysis of mAb monomer, dimer, and fragment

TSKgel SuperSW mAb HR:

- High resolution analysis of mAb monomer, dimer, and fragment due to shallow calibration slope of corresponding molar mass region

High throughput analyses of dimer and monomer

TSKgel SuperSW mAb HTP:

- Smaller size (4.6 mm ID × 15 cm) offers high throughput analysis, separating the dimer and monomer in less time. Results are similar to analysis of mAbs with TSKgel G3000SW_{XL}, but in half the separation time.
- Low pressure drops make this column compatible with both HPLC and UHPLC systems.

High resolution of mAb multimers and aggregates

TSKgel UltraSW Aggregate:

- Smaller particle size (3 μm) and higher molar mass exclusion limit than other two columns (2,500 kDa, globular proteins)
- Offers high resolution separation of mAb multimers and aggregates

Applications

Figure 1 demonstrates the superior resolution of the TSKgel SuperSW mAb HR and TSKgel SuperSW mAb HTP columns compared to four competitive columns in the analysis of a mAb monomer and dimer. TSKgel SuperSW mAb HR shows superior resolution of gamma-globulin dimer and monomer, while TSKgel SuperSW mAb HTP separates the gamma-globulin dimer and monomer in half the analysis time of the conventional columns.

Figure 2 shows the analysis of a mouse-human chimeric IgG using the TSKgel UltraSW Aggregate column. Superior resolution of the mAb trimer and dimer is obtained.

These applications display the superiority of the new TSKgel SW mAb columns for the analysis of monoclonal antibodies, both in resolution and speed.

Figure 1. Comparison of resolution of mAb dimer and monomer

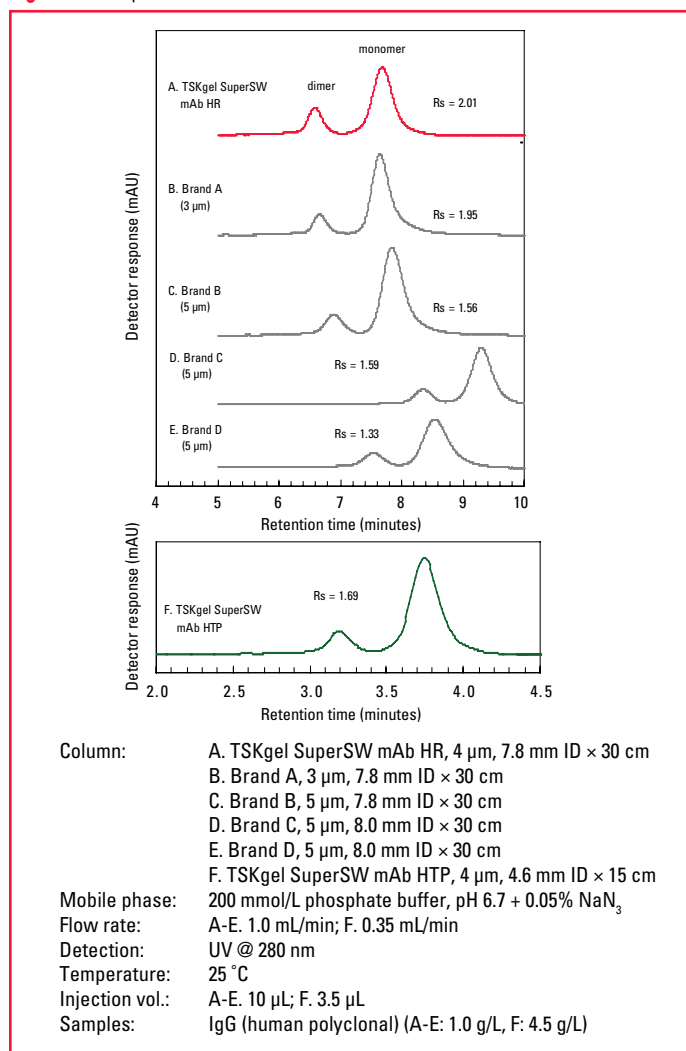
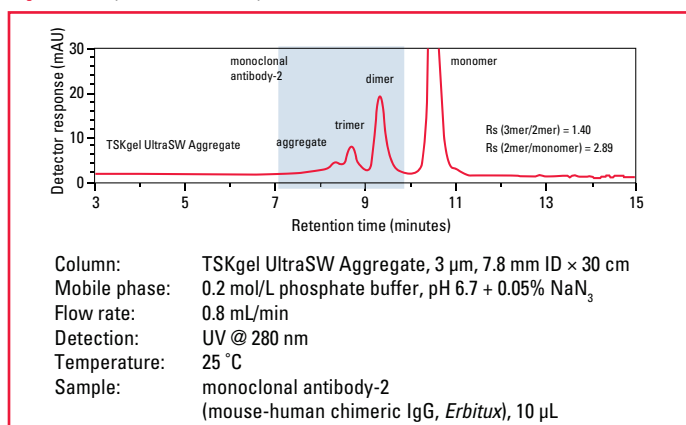


Figure 2. Separation of a therapeutic mAb



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Ordering Information

Part#	Description	Matrix	Housing	ID (mm)	Length (cm)
22854	TSKgel SuperSW mAb HR, 4 µm	Silica	Stainless Steel	7.8	30
22855	TSKgel SuperSW mAb HTP, 4 µm	Silica	Stainless Steel	4.6	15
22856	TSKgel UltraSW Aggregate, 3 µm	Silica	Stainless Steel	7.8	30
22857	TSKgel guard column for TSKgel SuperSW mAb HR, 4 µm	Silica	Stainless Steel	6	4
22858	TSKgel guard column for TSKgel SuperSW mAb HTP, 4 µm	Silica	Stainless Steel	3	2
22859	TSKgel guard column for TSKgel UltraSW Aggregate, 3 µm	Silica	Stainless Steel	6	4

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