

Ion Exchange Chromatography columns for Protein and Antibody

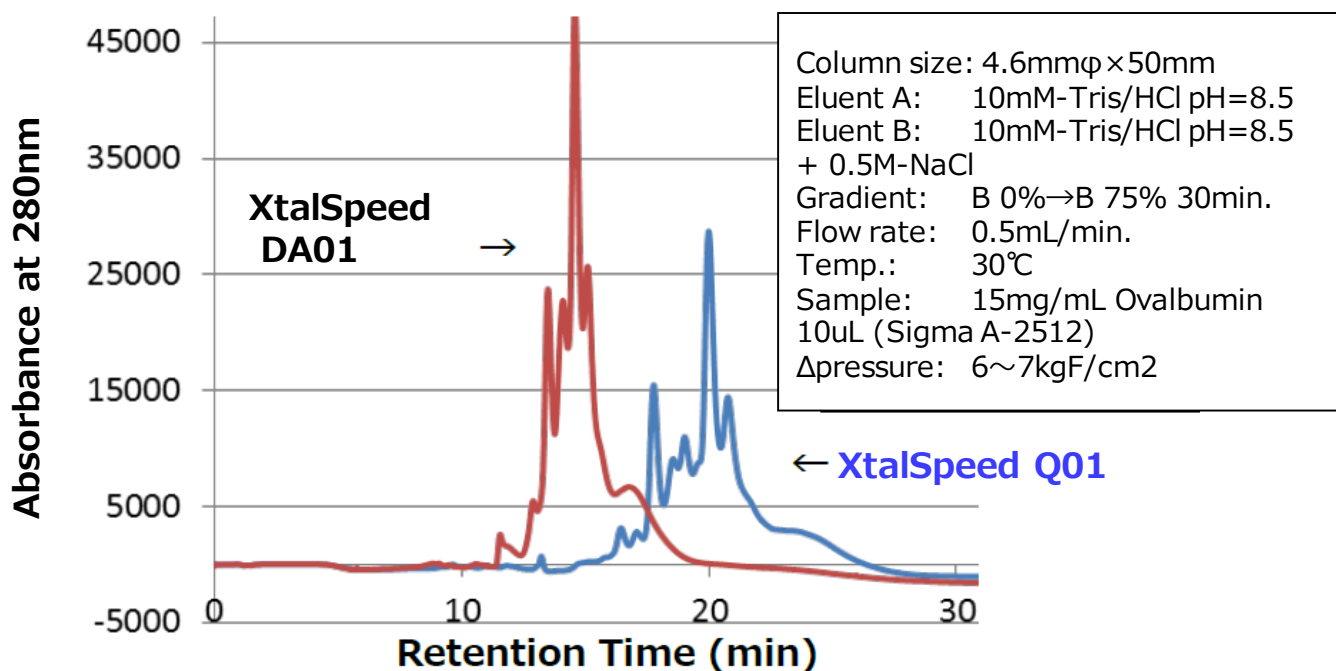
XtalSpeed™

About XtalSpeed™

- ◆ High Resolution
- ◆ Least non-specific protein binding
- ◆ Durable for large sample loadings
- ◆ Both Analytical & Preparative use with a single column
- ◆ First choice for protein kinase crystallization (DA01)
- ◆ Antibody variants analysis and semi-preparation (SP01)



Analysis of ovalbumin with XtalSpeed™ Q01 and DA01



Column list

Product	Functional Group	Column size	Column volume	Housing
SP01	Sulfopropyl	Φ4.6mm×50mm Φ4.6mm×100mm Φ7.5mm×100mm Φ11.5mm×100mm	0.8mL 1.6mL 4.4mL 10.4mL	PEEK
DA01	Diethylaminoethyl			
Q01	Quaternary ammonium			
CM01	Carboxymethyl			

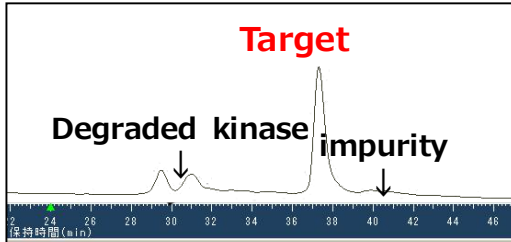


DA01 Application Data

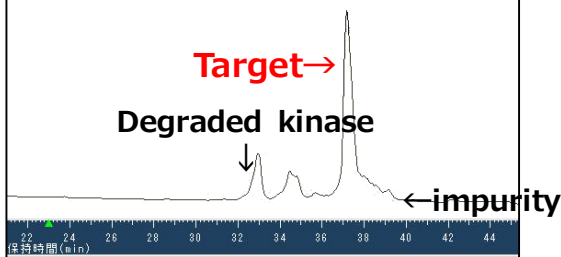
<Purification of basic kinase (MW c.a. 100kDa)>

XtalSpeed showed highest resolution with just 5cm column

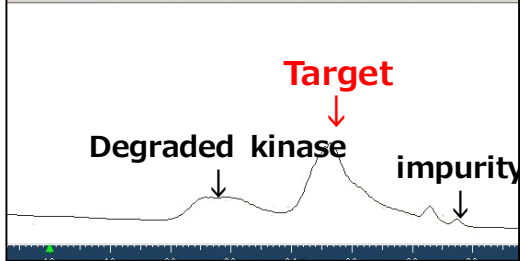
XtalSpeed™
DA01
0.6mL/min



Tosoh Stat
1.0mL/min



Resource
1.0mL/min



Column Size

DA01 $\Phi 4.6 \times 50$ mm

Stat $\Phi 4.6 \times 100$ mm

Resource $\Phi 6.4 \times 30$ mm

Load: 50 μ g

Eluent

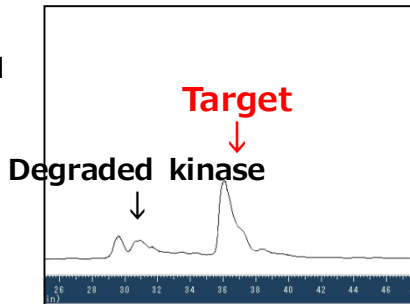
A: 50mM HEPES-NaOH(pH7)

B: A + 1M NaCl

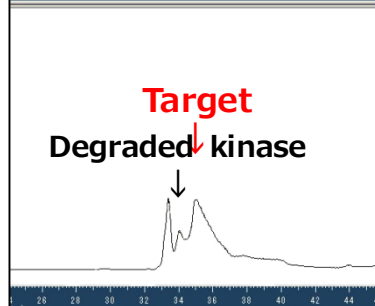
Gradient: 0-40%B/40CV

– With sample Loading of 400 μ g –

XtalSpeed™
DA01
0.6mL/min



Tosoh Stat
1.0mL/min



You can use XtalSpeed as Preparative column.

- ☆ High recovery!
- ☆ High Purity!
- ☆ High Speed!

Save your time to purify your protein!

 MITSUBISHI CHEMICAL

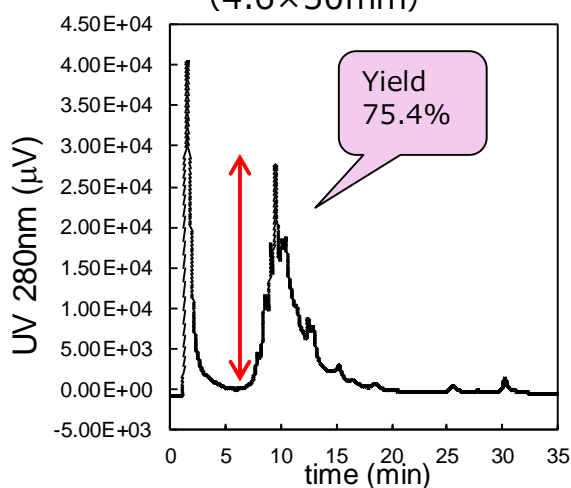
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Tel: +81-3-6748-7146 Fax: +81-3-5487-6810 Web: www.diaion.com/en

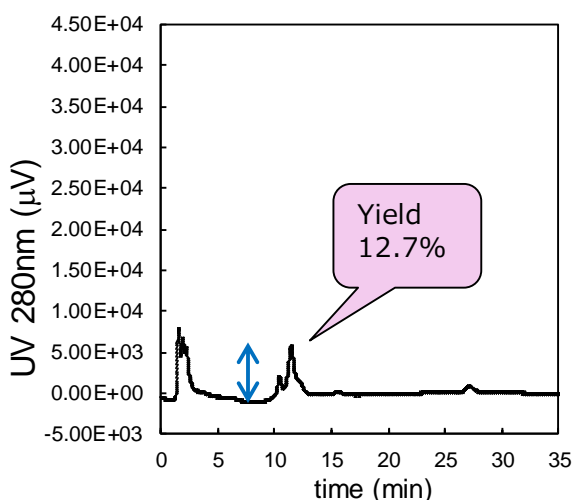
SP01 Application

◆ Purification of Zein (Protein from corn)

XtalSpeed™ SP01
(4.6×50mm)

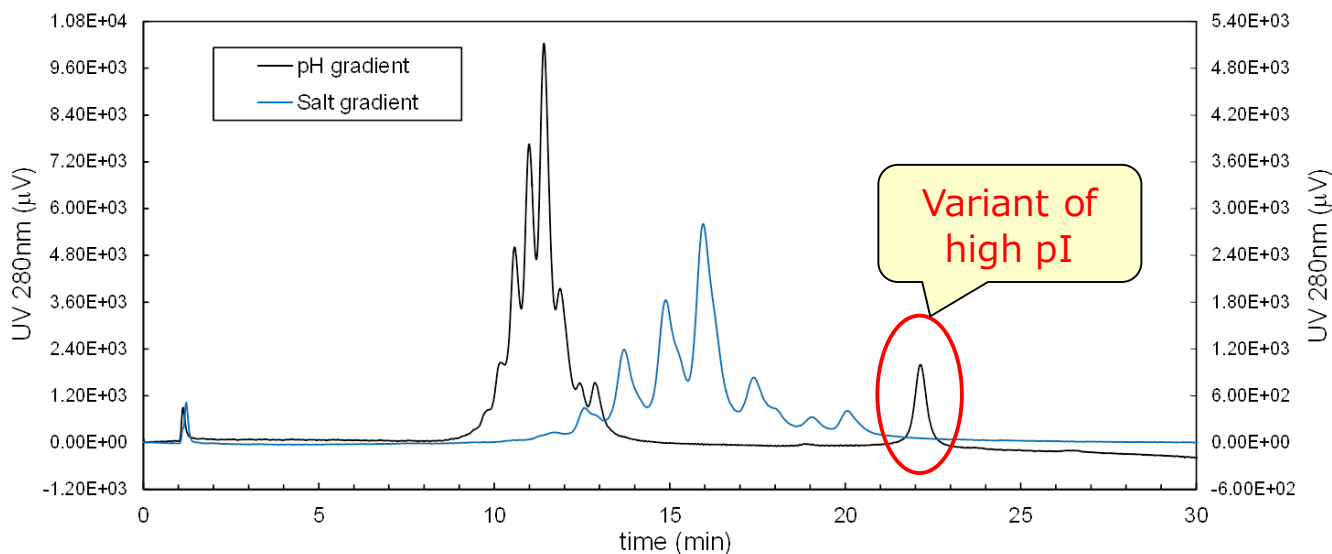


Resource



Conditions: Eluent A, 20mM Acetic acid + 6M Urea (pH4.24);
Eluent B, A + 1.0M NaCl (pH3.99);
Flow rate, 0.5ml/min;
Gradient, 0-50% B over 30min.
Sample: Zein (4mg/ml - eluent A); Injection, 20ml.

◆ Chromatogram of Antibody variants; pH/NaCl gradient



pH gradient system

- Eluent:
 - (A) CX-1pH Gradient Buffer A (pH 5.6)
 - (B) CX-1pH Gradient Buffer B (pH 10.2);
- Gradient : 0-100%B over 30min
+ 100%B over 5min;
- Sample: Erbitux (0.5mg/ml), 40ml.

Salt gradient system

- Eluent:
 - (A) 20mM Na phosphate (pH6.5)
 - (B) (A) + 1M NaCl;
- Gradient : 0-5%B over 30min
+ 5-100%B over 5min;
- Sample: Erbitux (0.5mg/ml), 20ml.

