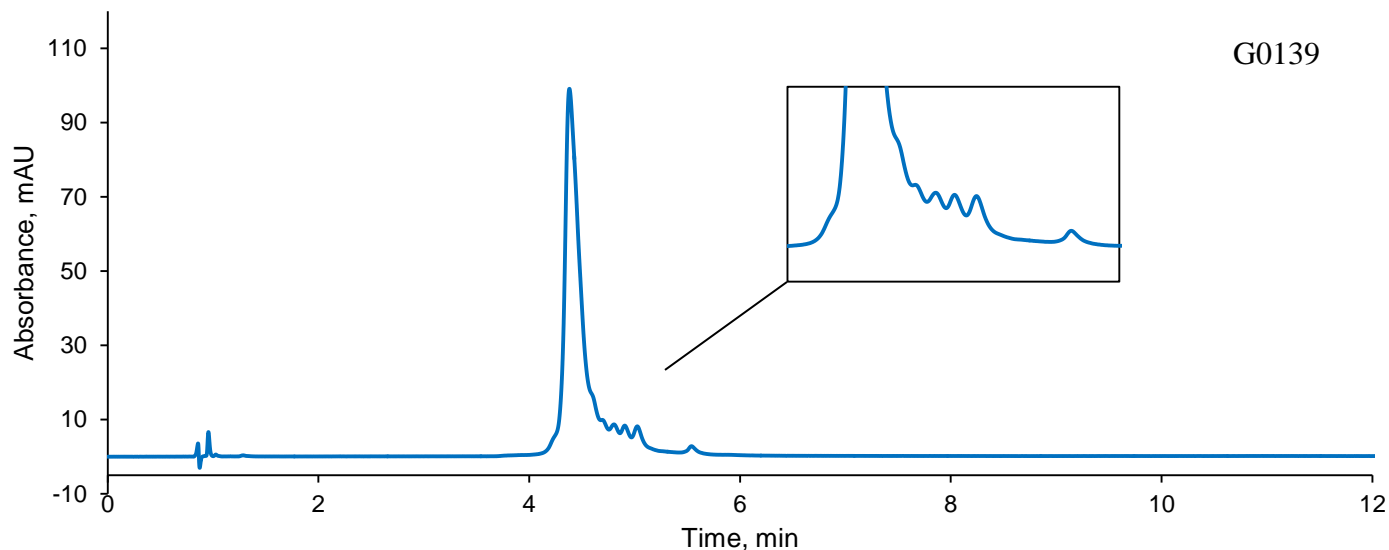


Application Note: 149-PR

## HALO 1000Å C4 Protein Column for High Resolution Separation of a Monoclonal Antibody



### TEST CONDITIONS:

Column: HALO 1000Å C4, 2.7µm, 2.1 x 100 mm

Part Number: 92712-614

A= Water, 0.1% TFA

B= 80/20 ACN/Water, 0.085% TFA

Gradient:

Time (min.)	%B
0.00	40
12.00	47.5

Flow Rate: 0.4 mL/min

Pressure: 210 bar

Temperature: 80 °C

Injection Volume: 2 µL

Sample Solvent: 70/30 Water/ACN

Detection: UV 280 nm, PDA

Data Rate: 12.5 Hz

Response Time: 0.05 sec.

Flow Cell: 1 µL

LC System: Shimadzu Nexera X2

### Monoclonal Antibody Structure:



Image from the RCSB PDB ([www.rcsb.org](http://www.rcsb.org)) of PDB ID 1HZH (E.O. Saphire, P.W. Parren, R. Pantophlet, M.B. Zwick, G.M. Morris, P.M. Rudd, R.A. Dwek, R.L. Stanfield, D.R. Burton, I.A. Wilson) (2001) Crystal structure of a neutralizing human IGG against HIV-1: a template for vaccine design Science 293: 1155-1159)

Trastuzumab (MW ~148 kDa) is a monoclonal antibody used to treat breast cancer. Enhanced resolution of trastuzumab and its variants is demonstrated in the chromatogram above. The pores of the HALO 1000Å C4 Protein particles accommodate larger biomolecules enabling superior separations at high temperatures.