

Spin Tips for Peptide Samples

GL-Tip Series

Spin Tips for Peptide Fractionation

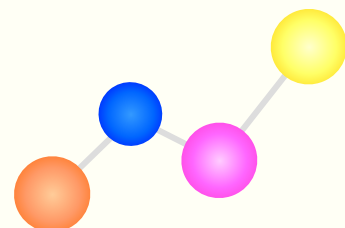
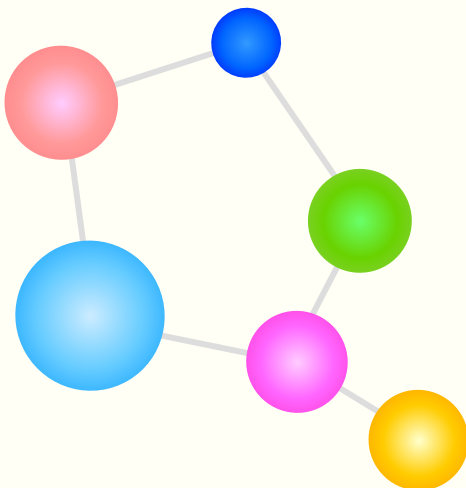
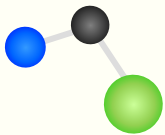
NEW

GL-Tip SCX and GL-Tip SDB-SCX

Highly
Efficient
Fractionation

High-Yield

Simple procedure
using centrifuge



GL-Tip SCX is packed with strong cation polymer (SCX) and GL-Tip SDB-SCX are packed with styrene divinyl benzene polymer (SDB) and strong cation polymer (SCX). GL-Tip SDB-SCX is packed in a two layer format consisting an SDB and SCX media. Undesalted peptide samples can be used in GL-Tip SDB-SCX as the first SDB layer can desalt the sample.

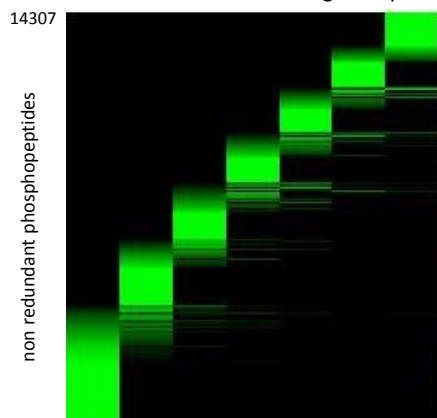


Comparison of Traditional Gradient Elution vs TFA Gradient Elution

A gradient elution using cation SCX media is commonly used in shotgun proteomics to fractionate peptide samples from complex samples such as cell or tissue extracts. The biggest challenge arises when identifying the same peptide from one fractionated peptide sample to another, which results in lowering efficiency. The newly developed TFA gradient elution method (patent applied) identifies more peptides without decreasing operation efficiency.

Comparison of Efficiency between Traditional Gradient Elution vs TFA Gradient Elution using DLD-1 Human Large Intestinal Cancer Cell derived Phosphopeptides

<NEW TFA Gradient Elution using GL-Tip SDB-SCX>

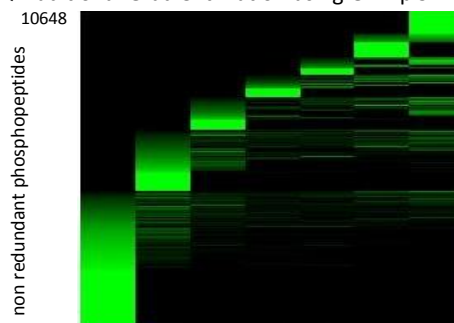


Fraction	1	2	3	4	5	6	7
TFA (%)	0	1	2	3	3	4	0
Ammonium acetate (mM)	0	0	0	0	100	500	500

Concentration in elution buffer

(Data provided from the National Institute of Biomedical Innovation, Dr. Jun Adachi)

<Traditional Gradient Elution using GL-Tip SDB-SCX>



Fraction	1	2	3	4	5	6	7
Ammonium acetate (mM)	20	50	75	125	200	500	0
NH ₄ OH (%)	0	0	0	0	0	0	0.1

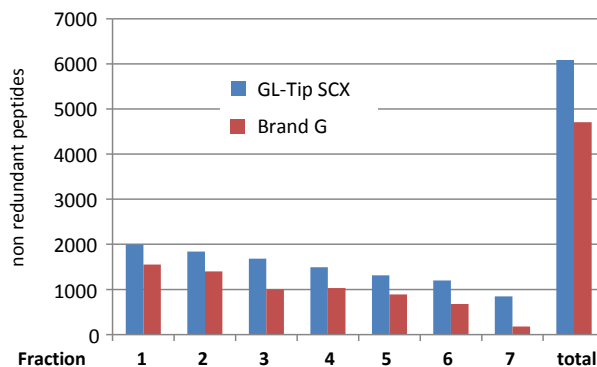
Concentration in elution buffer

As proven above, the newly developed TFA gradient elution identified 14307 peptides promising higher efficiency than the traditional gradient elution method.

Comparison of Number of Quantified Peptides

Compared results between commercially available brand G's tip column. GL-Tip SCX recovered more peptides. The usage of the newly developed TFA gradient elution method provide less chance of identifying the same peptide from one fractionated sample peptide to another resulting in higher efficiency.

Sample/Procedure: Trypsin digestion of HeLa cell lysate 25 µg each were fractionated and 40% of the recovered sample were identified via LTQ-Orbitrap XL, 45 minutes gradient using Maxquant 1.5.1.2, uniprot human database.



Number of Identified Non Redundant Peptides

Fractions	1	2	3	4	5	6	7	total
GL-Tip SCX	1996	1839	1684	1491	1311	1196	847	6085
Brand G	1552	1397	1004	1032	890	676	179	4704

(Data provided from the National Institute of Biomedical Innovation, Dr. Jun Adachi)

Specification

Description	GL-Tip SCX	GL-Tip SDB-SCX
Tip Volume	200 µL	200 µL
Sample	Angiotensin II	Angiotensin II
Sample Loading Capacity (Approx.)	60 µg	60 µg

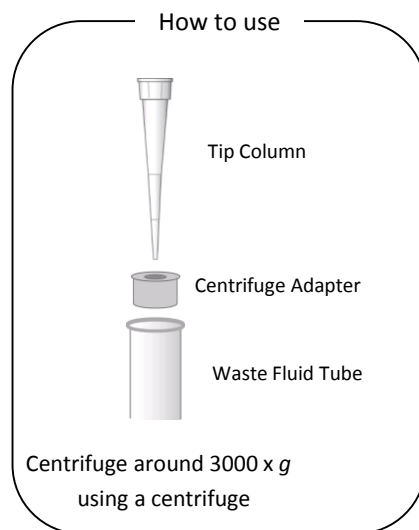


Ordering Guide

* Centrifuge Adapter, 24 pcs/pk (Cat# 5010-21514) must be purchased once to use GL-Tip spin tips.

* This centrifuge adapter is reusable.

Description	Cat.No.
GL-Tip SDB-SCX, 96 pcs/pk	7510-11202
GL-Tip SCX, 96 pcs/pk	7510-11203
* Centrifuge Adapter, 24 pcs/pk	5010-21514
Centrifuge Adapter for 96-well plate, 1 ea.	5010-21341
Centrifuge Adapter for 96-well plate, 2 pcs	5010-21343



Worldwide Ordering Information

GL Sciences, Inc. USA

4733 Torrance Blvd. Suite 255
 Torrance, CA 90503
 Phone: 310-265-4424
 Fax: 310-265-4425
 Email: info@glsciencesinc.com
 Web: www.glsciencesinc.com

GL Sciences B.V.

De Sleutel 9
 5652 AS Eindhoven
 The Netherlands
 Phone: +31 (0)40 254 95 31
 Email: info@glsciences.eu
 Web: www.glsciences.eu

GL Sciences, Inc. Japan

22-1 Nishishinjuku 6-Chome
 Shinjuku-ku, Tokyo,
 163-1130, Japan
 Phone: +81-3-5323-6620
 Fax: +81-3-5323-6621
 Email: world@glsc.co.jp
 Web: www.glsciences.com

International Distributors

Visit our Website at
www.glsciences.com/distributors