Spin Tips for Peptide Samples

GL-Tip Series

Spin Tips for Peptide Fractionation

GL-Tip SCX and GL-Tip SDB-SCX

- Highly Efficient Fractionation
- High-Yield
- Simple procedure using centrifuge
GL-Tip SCX, GL-Tip SDB-SCX

Peptide Fractionation

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

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

Comparing 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

<table>
<thead>
<tr>
<th>Fractions</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>GL-Tip SCX</td>
<td>1996</td>
<td>1839</td>
<td>1684</td>
<td>1491</td>
<td>1311</td>
<td>1196</td>
<td>847</td>
<td>6085</td>
</tr>
<tr>
<td>Brand G</td>
<td>1552</td>
<td>1397</td>
<td>1004</td>
<td>1032</td>
<td>890</td>
<td>676</td>
<td>179</td>
<td>4704</td>
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</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Description</th>
<th>GL-Tip SCX</th>
<th>GL-Tip SDB-SCX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tip Volume</td>
<td>200 μL</td>
<td>200 μL</td>
</tr>
<tr>
<td>Sample</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample Loading Capacity (Approx.)</td>
<td>Angiotensin II 60 μg</td>
<td>Angiotensin II 60 μg</td>
</tr>
</tbody>
</table>

**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.

<table>
<thead>
<tr>
<th>Description</th>
<th>Cat.No.</th>
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</thead>
<tbody>
<tr>
<td>GL-Tip SDB-SCX, 96 pcs/pk</td>
<td>7510-11202</td>
</tr>
<tr>
<td>GL-Tip SCX, 96 pcs/pk</td>
<td>7510-11203</td>
</tr>
<tr>
<td>* Centrifuge Adapter, 24 pcs/pk</td>
<td>5010-21514</td>
</tr>
<tr>
<td>Centrifuge Adapter for 96-well plate, 1 ea.</td>
<td>5010-21341</td>
</tr>
<tr>
<td>Centrifuge Adapter for 96-well plate, 2 pcs</td>
<td>5010-21343</td>
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**Worldwide Ordering Information**

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