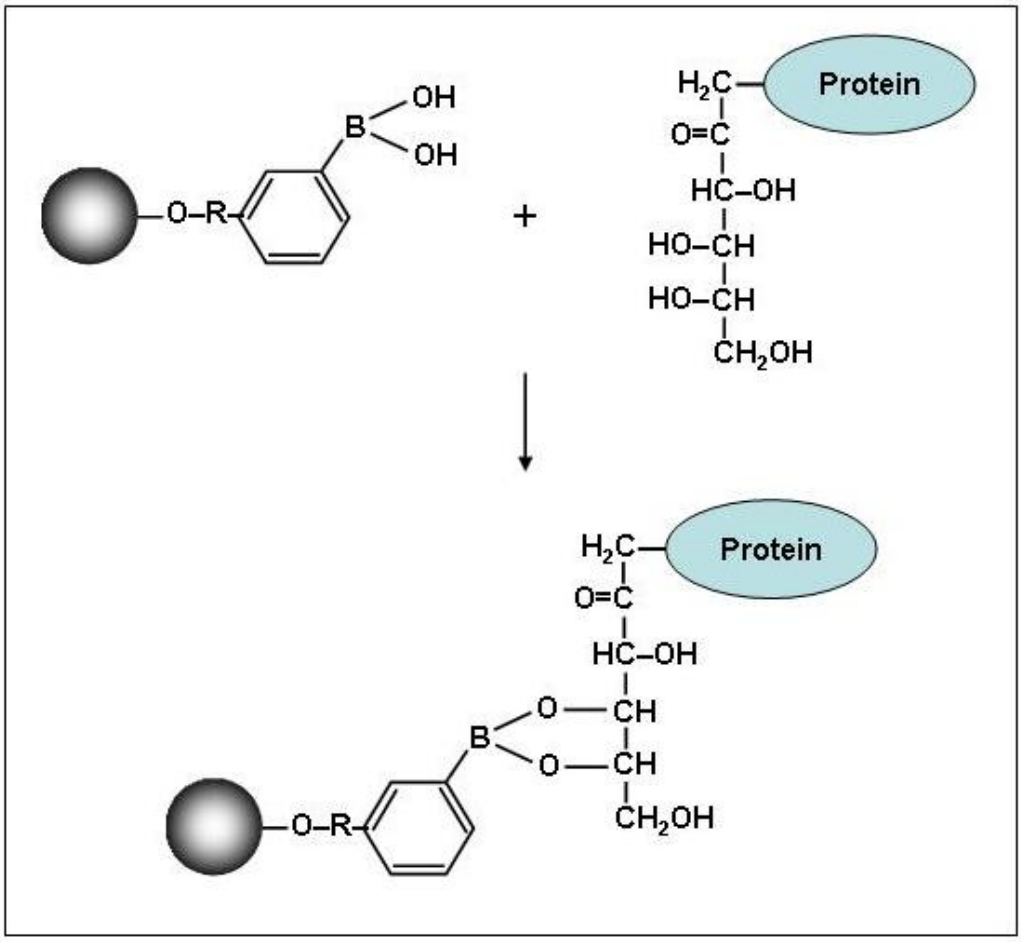
Protocol for isolation of vicinal cis-diol containing sugar compounds with SiMAG-Boronic Acid

Introduction:

SiMAG-Boronic particles represent an easy-to-use affinity support for purification of glycoproteins, sugars, ribonucleotides and other small molecular weight compounds which contain vicinal cis-diol groups.

The immobilized boronic acid bind to vicinal cis-diol groups on sugars, such as mannose, galactose, glucose or ribose. After the binding and washing step the sugar containing sample can be eluted from the particles by lowering the pH or by addition of sorbitol.



Equipment & Reagents:

- **SiMAG-Boronic Acid** (w/v: 10 mg/ml in ddH_2O, 0.05 % sodium azide)
- **Wash & Binding buffer (W&B buffer):**
  0.25 M ammonium acetate, 50 mM $MgCl_2$, pH 9.5.
- **Elution buffer:**
  50 mM Tris, 0.1 M sorbitol, pH 8.5.
- **Magnetic separator** (**e.g. MagnetoPURE,** Product Number: MP-10)
- **Vortex, Tube Rotator**

Protocol:

The following general protocol describes the purification of vicinal cis-diol containing molecules with SiMAG-Boronic Acid.

1. Wash 100 µl **SiMAG-Boronic Acid** three times with 1.0 ml **W & B buffer** by magnetic separation and resuspend the beads in 0.5 ml **W & B buffer** by vortexing.
.
2. Add the sample to the particle suspension and fill up with **W & B buffer** to a final volume of 1 ml.
3. Incubate at room temperature for 15-30 minutes by gentle mixing (tube rotator).
4. Place the tube in the magnetic separator and discard the supernatant.
5. Add 1 ml **W & B buffer** and gentle mix the suspension by vortexing or tube rotating or pipetting (up and down). Collect the particles for 30 seconds with the magnetic separator, remove and discard the supernatant and repeat the washing step two times.
6. After the last wash step, resuspend the particles in 100 µl **Elution buffer**.
7. Incubate at room temperature for 15 minutes by gentle mixing.
8. Place the tube in the magnetic separator and transfer the supernatant in a new clean tube.

Contact

chemicell GmbH

Eresburgstrasse 22-23
12103 Berlin
Germany

@ **info@chemicell.com**

Tel.: +49-30-2141481
Fax.: +49-30-21913737
e-mail: info@chemicell.com
Internet: www.chemicell.com