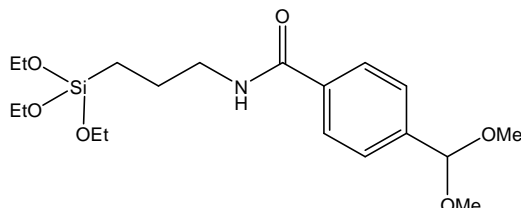


4FB-Silane

C₁₉H₃₃NO₆Si, MW: 399.55

Catalog# HL-1004

4FB-Silane Coating of Silica Surface Protocol



Silica Bead Modification Protocol

- 1) Weigh out 100 mg of silica beads.
- 2) Wash the silica beads 3 times with EtOH; pellet the bead on a centrifuge for 2 minutes at 750g, remove the supernatant. Bring the beads up in EtOH and repeat.
- 3) Make a 2% solution of 4FB Silane (10 mg) in EtOH (500 μ L), add 2% (10 μ L) water to the solution to dissolve any remaining solids. This may require intensive vortexing to get the silane into solution.
- 4) Add the 4FB Silane solution to the washed bead pellet so the silane/silica ratio is 20% w/v (500 μ L).
- 5) Vortex the bead sample and incubate at room temperature on a rotator for 30 minutes.

Note: Check the pH periodically with pH paper and be sure that it doesn't go below pH 7.4 during the incubation steps!! Adjust the pH with 1M NaOH, if necessary.

- 6) Add an additional 2% (10 μ L) water to the bead solution and continue the incubation for 15 minutes.
- 7) Add additional 10% (50 μ L) water to the bead solution and continue the incubation for 5 minutes.
- 8) The washing step is very important: Washed the beads 3X each with water, ethanol, water, PBS and Conjugation Buffer (100 mM sodium phosphate, 150mM NaCl, pH 6.0) in that order, using the spin protocol from step 1.
- 9) Check the supernatant to see if there is a significant A280 from the 4FB-silane; add 100 μ L of supernatant to 900 μ L of Buffer. The A280 should give a reading no higher than 0.05.
- 10) Bring the beads up in Conjugation Buffer such that the solution is a 20% w/v beads in Conjugation Buffer.

The 4FB-modified beads are now ready to be conjugated the HyNic-modified biomolecule.

Note 1: For large biomolecules (proteins and antibodies), 20 μ g of protein/mg of bead is recommended for maximum conjugation. Allow the 4FB beads to conjugate with the protein in the presence of TurboLink Catalyst Buffer for 4 hours at room temperature on a rotor or shaker.

Note 2: The acetal on the 4FB Silane linker readily hydrolyzes in aqueous solution to become a 4FB functional group.

Note: This protocol can be downloaded from the appropriate category in the Solulink Library at <http://www.solulink.com/library>.

The products offered here are for research use only. Any commercial application will require a license from Solulink. The Solulink Conjugation System is patented and has multiple patents pending. Please contact Solulink for information regarding licensing information. Solulink products and methods may be covered by one or more of the following United States patents Nos. 6,686,461, 6,800,728, 7,102,024, 7,173,125, 7,462,689 and other pending patent applications. Information in this manual is subject to change without notice and does not constitute a commitment on the part of Solulink, Inc. It is supplied on an "as is" basis without any warranty of any kind, either explicit or implied. Information may be changed or updated in this manual at any time. This document may not be copied, transferred, reproduced, disclosed, or duplicated, in whole or in part, without the prior written consent of Solulink, Inc. This documentation is proprietary information and protected by the copyright laws of the United States and international treaties. The manufacturer of this documentation is Solulink, Inc.

Note: This protocol can be downloaded from the appropriate category in the Solulink Library at <http://www.solulink.com/library>.