



## Absolute Mag™ Thiol Magnetic Particles

### Antibody Conjugation Protocol

Cat.No: WHM-N019

#### Product Description

Absolute Mag™ Thiol Magnetic Particles (# WHM-N019) offer the flexibility to generate custom and functional magnetic beads with simple bioconjugation to desired molecules. The particles have strong magnetism, sensitivity and binding specificity. In addition, magnetic separation is fast yet gentle, causing minimal disruption to your target proteins, permitting the isolation and preservation of labile compositions and conformations that might otherwise being interfered. For research use only. Not for human therapeutic or diagnostic use.

#### Materials required

Absolute Mag™ Thiol Magnetic Particles (Cat. No: WHM-N019)

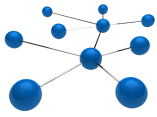
NAP Column not included

Crosslinker Sulfo-SMCC or SMCC not included

#### Protocol

1. Determine needed surface coverage of antibody per nanoparticle.  
**Note:** The general range is about 0.3 -1.5 mg antibody per mg of Absolute Mag™ Thiol Magnetic Particles.
2. Mix Antibody in water with SMCC (Succinimidyl trans-4(maleimidylmethyl) cyclohexane-1-carboxylate) based crosslinker in PBS solution. Incubate for 40-60 min.  
**Note:** SMCC is used to crosslink the amine groups on antibody with the -SH groups from Absolute Mag™. SMCC based crosslinker is suggested because of its superior chemical stability when used with our nanoparticles and its ease of use.  
**Note:** The ratio of SMCC to antibody is 1: 10.
3. Desalt Antibody-SMCC using NAP column.  
**Note:** This step removes the free SMCC from the Antibody-SMCC mixture.
4. Mix purified Antibody-SMCC with Absolute Mag™ Thiol Magnetic Particles. Incubate overnight under continuous rotation at room temperature.
5. Separate out Absolute Mag™ Thiol Magnetic Particles-Antibody by magnetic purification.
6. Wash 1-3 times with PBS or other buffer solution. Remove non-magnetically captured solution.  
**Note:** One wash could be sufficient for most applications.

Resuspend washed Thiol Magnetic Particles-Antibody conjugates into preferred buffer, ready to use.



Absolute Mag™ Thiol Magnetic Particles for Antibody Purification and Concentrating:

General Optimal Proportion: 1 mg of magnetic beads for 50 µg of antibody. The proportion may be optimized based on specific antibody or protein property.

Note for Large Volume (>50 ml) Protein Purification:

Increase incubation time to ensure yield.

Increase magnetic pull down time to ensure majority of beads forming the pellet, this could be confirmed by total clearness of the supernatant.