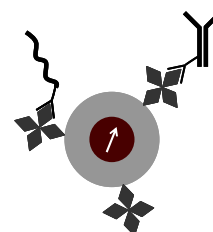


Mager

Product Information & Intended Use

Mager is designed for rapid and simple conjugation of biomolecules onto magnetic beads at your bench by yourselves. Mager provides you with well-dispersed Fe_3O_4 beads with diameter around 50 nm, as well as biotinylation kit. The Fe_3O_4 beads are functionalized with streptavidin. Via streptavidin-biotin interaction, oligonucleotide, protein, enzyme and antibody can be easily conjugated with Fe_3O_4 magnetic beads for molecular and biological applications.



Versatile Applications

By using Mager to conjugate biomolecules onto magnetic beads, these bio-functionalized magnetic beads are applied significantly in the following issues.

1. Protein sample preparation/purification.
2. To identify targets for therapy, diagnostic markers and to generate lead molecules in drug discovery.
3. Isolate certain type of cells for downstream applications.
4. DNA/RNA binding protein isolation
5. Magnetically labeled immunoassay (with aid of XacPro, MagQu)

List of Components

Component	Quantity
NH_2 -reactive biotin	3 tubes
WS buffer	4 ml
Reaction buffer	500 ul
Filtration tube	3 tubes
Magnetic fluid	5 ml
Column	2 tubes
Elution buffer	10 ml

Additional Required Accessories/Materials

1. 10 μ l and 200 μ l pipettes
2. Incubator (37 °C)
3. Microcentrifuge
4. DMSO
5. Magnet separator (e.g. Magtractor, MagQu)

Protocol

Part A. Biotin Labeling Reaction

1. Add 100 μ l of WS Buffer and the solution containing 50- 200 μ g of to-be-conjugated biomolecule, such as antibody/protein/nucleic acid, to a filtration tube.
2. Mix the solution with pipetting several times, and centrifuge the mixed solution at 8,000 x g for 10 minutes. Discard the flow-through.
3. Add 10 μ l of DMSO to NH₂-Reactive Biotin, and dissolve with moderate pipetting.
4. Add 100 μ l of Reaction Buffer to the filtration tube, and then add 10 μ l of NH₂-Reactive Biotin solution to the filtration tube. Mix by moderate pipetting.
5. Incubate the filtration tube at 37 °C for 10 minutes.
6. Add 100 μ l of WS Buffer to the filtration tube, and centrifuge the filtration tube at 8,000 x g for 10 minutes^{a*}. Discard the flow-through.
7. Add 200 μ l of WS Buffer to the filtration tube, and centrifuge the filtration tube at 8,000 x g for 10 min. Repeat this step twice.
8. Add 200 μ l of WS Buffer to recover the conjugates. Transfer the solution to a clean eppendorf and store at 4 °C.

^{a*}: If you found some solution still remains on the membrane after the centrifugation, centrifuge it for another 5 minor or increase the centrifuge speed.

Part B. Conjugation of Biotin-biomolecule and Streptavidin-magnetic fluid

1. Add 500 - 2000 μ l of streptavidin-magnetic solution to a clean eppendorf, and then add 10-15 μ l of biotin-biomolecule solution into the eppendorf. Mix it by moderate pipetting.
2. Incubate the eppendorf at 4 °C for 8 - 24 hrs.

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3. Place a magnetic column on the magnetic separator. Rinse the column with 5 ml of PBS.
4. Apply the conjugated solution from step 1 to the column. Press the piston gently.
5. Take the column out of the magnetic separator, and add 1 ml of elution buffer into the column. Click the top of column gently and collect the flow-through in a clean bottle or tube. The eluted solution contains magnetic beads conjugated with biomolecules.

Storage

Please keep the components except columns at 2 – 8 °C. The validity is warranted for 6 months without being opened. Please run out of materials within 1 month as Mager being opened.

Contact Information

Please contact us when you have any question or comments via e-mail: info@magqu.com, or phone: +886-2-8667-1897.

Remarkable Notes

1. Please keep the components of Mager away from magnets.
2. Do not freeze the liquid components of Mager.
3. Liquid components must be agitated before use.
4. Mager is for research use only, not for use in diagnostic procedures.



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