

Cat. No. MF-NHH-0030

Magnetic Fluid-Amine

Product description

Magnetic Fluid-Amine is magnetic bead with surface functional group $-NH_2$. The magnetic bead consists of a single-crystal Fe_3O_4 sphere core and dextran coating layer. Through chemical modification of dextran, the primary amino group ($-NH_2$) are joined to the magnetic beads through a short hydrophilic linker. The hydrophilic surface ensures the magnetic beads excellent dispersion ability and easy handling property in a wide variety of buffers.

The magnetic beads with surface-reactive amino groups allow immobilization of ligands such as proteins, peptides, carbohydrates or other target specific molecules.

Material supplied

Magnetic Fluid-Amine provides Fe_3O_4 beads coated with dextran of the particle sizes ranging from 30 to 40 nm in diameter. Amino group, about 50 mM, is coupled covalently to dextran. Magnetic Fluid-Amine is supplied in phosphate buffered saline, pH 7.4.

Additional material required

- MES Buffer (pH 6.0):
100 mM MES and 500 mM NaCl
- PBS, pH 7.4:
137 mM NaCl, 8.1 mM Na_2HPO_4 ,
1.47 mM KH_2PO_4 and 2.7 mM KCl
- Quench Buffer :
TBS, pH 8.0 **or** 5-10 mM
hydroxylamine
- Desired antibody or ligand
- Magnetic stand: **Magstand** (MSD-01)
for the best performance
- EDC [1-(3-dimethylaminopropyl)-3-ethylcarbodiimide hydrochloride], $C_8H_{17}N_3 \cdot HCl$,
MW = 191.7, CAS No. 25952-53-8
- MES [2-(morpholino) ethanesulfonic acid],
 $C_6H_{13}NO_4S \cdot H_2O$, MW = 213.25,
CAS No.145224-94-8
- NHS [N-hydroxysuccinimide], $C_4H_5NO_3$,
MW = 115.09, CAS No. 6066- 82-6
- Tilt rotation device or vortexer
- Magnetic separating column
- Clean battle or tubes
- Pipette

Protocol

Preparation of Magnetic Fluid-Amine for use

1. Place a magnetic column on the magnetic separator. Rinse the column with 1 ml MES Buffer.
2. Transfer 2 ml Magnetic Fluid-Amine into the column. Press the piston to the column gently.
* **NOTE:** Press the piston to the column bottom not more than 1 min.
3. Take the column out of the magnetic separator.
4. Add 1 ml MES Buffer into the column. Click the top of column gently and collect the flow-through in a clean battle or tube.

Conjugation of protein or ligands

5. Prepare 50 mg/ml EDC solution in MES Buffer and 50 mg/ml NHS solution in MES Buffer respectively*.
* **NOTE:** Both EDC solution and NHS solution should be prepared freshly, protected from light, and kept on ice before use.
6. Add 0.4 ml EDC solution and 0.4 ml NHS solution to step 4 tube, and mix it.
7. Add 240 – 6000 μg (0.8 – 20 μM) antibody or ligand that you need and mix it.
8. Incubate with tilt rotation or shaker at 4 °C overnight.

Stop the Reaction

9. Add 1 ml Quench Buffer and mix it.
10. Incubate with tilt rotation or shaker for 30 minutes at room temperature.
11. Place a magnetic column on the magnetic separator. Rinse the column with 1 ml pH 7.4 PBS (or the buffer preferred).
12. Transfer the step 10 tube into the column. Press the piston to the column gently.
* **NOTE:** Press the piston to the column bottom not more than 1 min.
13. Add 0.5 ml pH 7.4 PBS (or the buffer preferred) into the column to wash the magnetic beads.
* **NOTE:** The magnetic beads don't stay on magnetic separator more than 2 min at step 12 & 13.
14. Take the column out of the magnetic separator.
15. Add 0.5 ml pH 7.4 PBS (or the buffer preferred) into the column. Click the top of column gently and collect the flow-through in a battle or tube.
16. Repeat steps 15.

Storage

Please keep the product at 2-8°C. The validity is warranted for 6 months.

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 reagent away from magnets during storage.
2. Do not freeze.
3. The product is for research use only.



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Product Information

Magnetic Qbeads Series

Products	Cat. No.
Qbeads-Protein A	MF-PRA-3000
Qbeads-Protein G	MF-PRG-3000
Qbeads-NTA-Ni	MF-HIS-3000
Qbeads-Streptavidin	MF-STA-3000
Qbeads-Silica	MF-SIL-5010 MF-SIL-5024
Qbeads-Hydroxyl	MF-DEX-3000
Qbeads-Carboxyl	MF-COO-3000
Qbeads-Amine	MF-NHH-3000
Qbeads-Carboxyl Labeling Kit	KT-COO-3000-5SE

Accessory

Products	Description	Cat. No.
Magdorf	for 1.5 ml eppendorf tube	MDF-08
	for magnetic separating column	MSD-01
Magstand	for 15 ml falcon tube	MSD-15
	for 50 ml falcon tube	MSD-50
Magtractor	for 96-well culture plates	MTR-96
	for 24-well culture plates	MTR-24
	for 6-well culture plates	MTR-06

Magnetic NanoParticle Series

Products	Particle size	Cat. No.
Magnetic Fluid- Hydroxyl	30 nm	MF-DEX-0030
	60 nm	MF-DEX-0060
	90 nm	MF-DEX-0090
Magnetic Fluid- Carboxyl	30 nm	MF-COO-0030
	60 nm	MF-COO-0060
	90 nm	MF-COO-0090
Magnetic Fluid- Amine	30 nm	MF-NHH-0030
	60 nm	MF-NHH-0060
	90 nm	MF-NHH-0090
NanoQ-Carboxyl Labeling Kit	60 nm	KT-COO-0060-1SE

Fluorescent Magnetic Nanoparticles

Products	Particle size	Cat. No.
Blue FluoroNanoQ	60 nm	MF-FBL-0060
Green FluoroNanoQ	60 nm	MF-FGR-0060
Red FluoroNanoQ	60 nm	MF-FRE-0060

Customized Conjugation Service

Products	Particle size	Cat. No.
Customized conjugated magnetic beads	3 μ m	MF-CCS-3000
	30 nm	MF-CCS-0030
Antibody or peptide provided by customers (100 ug)	60 nm	MF-CCS-0060
	90 nm	MF-CCS-0090



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