Cat. No. MF-NHH-3000

Qbeads-Amine

Product description

Qbeads-Amine is magnetic bead with surface functional group -NH_2. The magnetic beads consist of Fe_3O_4 magnetic sphere core and being coated with dextran. 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

Qbeads-Anime provides Fe_3O_4 beads coated with dextran of an average ~1 μm in diameter. Amino group, about 50 mM, is coupled covalently to dextran. Qbeads-Amine is supplied in phosphate buffered saline pH-7.4 with 0.09% Sodium Azide and 0.02% Tween-20.

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
- Magntic stand: **Magdorf** (MDF-08) for the best performance
- EDC [1-(3-dimethylaminopropyl)-3-ethylcarbo-diimide 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
- Eppendorf tubes & pipet

Protocol

Preparation of Qbeads-Amine for use

1. Resuspend the Qbeads-Amine thoroughly by pipetting or vortexing the vial.
2. Transfer 100 μL Qbeads-Amine into a clean tube.
3. Place the tube on the magnetic stand for 30-60 seconds to immobilize the beads at tube wall.
4. Discard the supernatant by aspiration with a pipette.
5. Remove the tube from magnetic stand.
6. Add 200 μL MES Buffer and resuspend the beads by pipetting.
7. Place the tube on the magnetic stand for 30-60 seconds to immobilize the beads at tube wall.
8. Discard the supernatant, and then remove the tube from the magnetic stand.
9. Repeat steps 6-8 twice.

Conjugation of protein or ligands

10. 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.
11. Add 60 μL MES Buffer, 20 μL EDC solution and 20 μL NHS solution to step 9 tube, and resuspend the beads by pipetting.
12. Add 50 μL MES Buffer with 6-150 μg antibody or ligand and resuspend the beads by pipetting.
13. Incubate with tilt rotation at room temperature for 90 minutes or at 4°C overnight.
14. Place the tube on the magnetic stand for 30-60 seconds to immobilize the beads at tube wall.
15. Discard (or collect, if desired) the supernatant as unbound substances, and then remove the tube from the magnetic stand.
16. Add 100 μL MES Buffer and resuspend the beads by pipetting.
17. Place the tube on the magnetic stand for 30-60 seconds to immobilize the beads at tube wall.
18. Discard the supernatant, and then remove the tube from the magnetic stand.

Stop the Reaction

19. Add 500 μL Quench Buffer and resuspend the beads by pipetting.
20. Incubate with tilt rotation for 30 minutes at room temperature.
21. Place the tube on the magnetic stand for 30-60 seconds to immobilize the beads at tube wall.
22. Discard the supernatant, and then remove the tube from the magnetic stand.
23. Add 500 μL Quench Buffer and resuspend the beads by pipetting.
24. Place the tube on the magnetic stand for 30-60 seconds to immobilize the beads at tube wall.
25. Discard the supernatant, and then remove the tube from the magnetic stand.
26. Add 500 μL PBS, pH 7.4 (or the buffer preferred) and resuspend the beads by pipetting.

27. Place the tube on the magnetic stand for 30-60 seconds to immobilize the beads at tube wall.
28. Discard the supernatant, and then remove the tube from the magnetic stand.
29. Repeat steps 26-28 twice.
30. Add 100 μL PBS, pH 7.4 (or the buffer preferred) and resuspend the beads by pipetting.
31. Store the beads at 2-8℃.

Storage

Please keep the reagent at 2-8℃. The validity is warranted for 12 months.

Contact Information

Please contact us when you have any question or comments via e-mail: info@maggu.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
Magstand	for magnetic separating column	MSD-01
	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 Antibody or peptide provided by customers (100 ug)	3 μm	MF-CCS-3000
	30 nm	MF-CCS-0030
	60 nm	MF-CCS-0060
	90 nm	MF-CCS-0090

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