

UptiBeads, Bioactive Magnetic microspheres

Product Description

Magnetics beads bioactivated with anti IgM

Specificity	Diameter (µm)	Binding capacity mg IgG / g Particules	Catalog Number	
			1.5 ml	10 ml
Anti-Mouse IgM	0.3 µm	2 - 3 mg	UPR08440	UPR08441
	1 µm	0.75 - 1.25 mg	UPR08420	UPR08421
Anti-Rabbit IgM	0.3 µm	Not determined	UPR08580	UPR08581
	1 µm	Not determined	UPR08480	UPR08481
Anti-Human IgM	0.3 µm	0.75 - 1 mg	UPR08990	UPR08991
	1 µm	0.1 - 0.3 mg	UPR08980	UPR08981

- Beads:** Monodisperse Magnetic polystyrene microspheres of 0.3 or 1 µm diameter
- Antibody:** Polyclonal affinity-purified anti IgM (µ chain specific) antibody raised in goat
- Format :** 1 % (10 mg beads / ml) suspension in PBS pH7.4 with preservatives.
- Storage :** +4°C. **Do not freeze**
Stability : 2 years

Scientific and Technical Information

- **UptiBeads** are encapsulated super-paramagnetic particles with mean diameter of 0.3 µm or 1 µm. They are supplied at 1% (10 mg/ml) suspension. Here are some physical characteristics:

Diameter (µm)	% ferrite	Density (g/cm ³)	particule surface (area (cm ²))	particule number (nb/ml)
0.31 µm	40%	1.54	3.0×10^{-9}	4.2×10^{11}
1.0 µm	40%	1.54	3.1×10^{-8}	1.2×10^{10}

Production process provide a high active surface area per unit of mass, and a total colloidal stability. Hence, the fact they are monodisperse allows accurate separations at rapid kinetics under a magnetic field of 0.1 to 1 Tesla. Aggregation should not occur under normal conditions of use (a technical notice for aggregation concerns is available)

- The **antibody** linked on the beads recognizes with a very high affinity all IgM isotypes. The loading was optimized for optimal IgM binding capacity (see table upper), and no leaching of ligand. The IgM coated beads are stable between pH 2 and 12, however incubation should be shortened as possible below pH 4. The storage buffer is physiologically compatible, thus UptiBeads can be used as ready-to-use reagent (a wash is recommended to avoid inhibition of peroxidase activity).

FT-UPR0844

- **Applications** are very wide:

Cell Biology

Cell depletion (negative selection)
 Cell isolation (positive selection), enrichment
 Cell and Bacteria concentration
 Lateral flow tests (visualize cell moving)

Molecular Biology

Purification (IgMs, proteins, complexes, receptors...)
 Immunoprecipitation (selective antigen purification from complex mixtures)
 Immunocapture (antigen bearing particles)
 mRNA and DNA isolation
 Nucleic acid hybridization and assays

Clinical diagnostic

Enzyme immunoassays (radio, colorimetric, or chemiluminescent detection) (in tube, in microplates)
 Slide agglutination tests
 Automated immunoanalysis

Other

Calibration in Flow Cytometry
 HTS screening

Direction for Use

Protocole for purification

This protocol is suggested to purify biological fluid. It may be to optimize the protocol according to the sample. Calculate the quantity of beads according to their binding capacity and the sample.

1. Homogenize well the vial before use. Wash once in PBS pH7.4 to discard preservative, stabilizer. Resuspend Uptibeads in 0.5 mg/ml of PBS.
2. Filtrate the sample on 0.45µm.
3. Fixation :
 Mix the beads and the sample. Incubate under gentle agitation at room temperature for 30 min.
4. Washing :
 Use a magnet or centrifuge gently. Add 1 ml of PBS and incubate 1 min. Discard the supernatant by a magnet or a centrifugation gently. Repeat twice again.
5. Elution :
 Elute with a minimal volume of 0.1 M citric acid pH 3.0 (to avoid to dilute a lot the fraction). Incubate 1-2 minutes. Use a magnet or centrifuge gently. The eluted fraction are neutralised with Neutralizing Buffer (#UPR99543) nor 1M Tris pH9.0
6. Resuspend the Uptibeads in PBS pH7.4 and store at +4°C.

Protocole for immunoprecipitation

This protocol may be to optimize according to the binding capacity of beads and the quantity of antigens.

- 1- Homogenize well the vial before use.
- 2- Incubate 50 µl of beads with antigenic suspension for 30 min in PBS BSA Tween.
- 3- Washing : after specific molecule binding, the beads are separated from the sample by a magnet or a gentle centrifugation.
 Wash the beads in PBS. Use a magnet or centrifuge gently to discard the supernatant. Add 1 ml of PBS to the pellet and wash twice again.
- 4- Add 1 ml of PBS on the pellet.

Other Information

UptiBeads are also available :

- with other polymers (silica, cellulose..)
- non functionalized, with chemical groups (NH₂, CH₂NH₂, ArNH₂, COOH, OH, SO₃H, N+(CH₃)₃, CONH₂, COOCH₃, CH₂Cl, SO₄>H), or coated with other bioactive molecules (streptavidin, carbohydrates...)
- with other diameters (de 15nm à 6µm)

Contact us for accessories (magnets)

rev. : C04VE

Contact your local distributor

Uptima, powered by



213 Avenue J.F. Kennedy - BP 1140
 03103 Montluçon Cedex - France
 Tél. 04 70 03 88 55 - Fax 04 70 03 82 66

Uptima@interchim.com