



MagVigen™ - COOH Surface Conjugation

Cat # 61006/K61006

v.1810101

Product Description

MagVigen™ - COOH surface magnetic nanoparticles provide you with the flexibility of coupling to amino-modified oligonucleotides, antibodies or other ligands through simple bioconjugation reactions. Under EDC (1-Ethyl-3-(3-dimethylaminopropyl) carbodllimide HCl) conditions, the carboxylic acid groups on the surface of the nanoparticles can form covalent amide bond to nucleotides and peptides via primary amine- or sulphhydryl groups. This kit provides the materials needed to complete the conjugation of oligo to the magnetic nanoparticles.

MagVigen™ - Oligo nanoparticles are ideal for capturing DNA or RNA through hybridization. MagVigen™ - Oligo can bind their complementary DNA or RNA strand after short incubation. The generated DNA or RNA complexes can then be separated from the rest of the sample by magnet. The captured DNA or RNA material can be eluted from the nanoparticles for downstream applications.

Advantages of MagVigen™ magnetic nanoparticles

- Magnetically responsive to a magnet, easy for bio-conjugation and purification
- Smaller nanoparticle size, higher binding capacity, longer settling time, compatible to automation and high throughput workflow
- Optimal surface chemistry, low non-specific binding
- Consistent, high quality results
- Efficient in DNA or RNA capture

Kit Contents

- Cat# 61006: MagVigen™ - COOH surface magnetic nanoparticles are provided in phosphate buffered saline (PBS), pH 7.4. Each vial contains 1 ml of solution with a particle concentration of 4 mg/ml.

Cat# K61006 further includes:

- 2 vials of EDC (1-Ethyl-3-(3-dimethylaminopropyl) carbodllimide HCl)
- Wash Buffer, Cat# A20001

MagVigen™ - COOH surface nanoparticles should be stored at 4°C.

Shelf life: 6 months

Protocol

Oligo conjugation to MagVigen™ – COOH Surface

1. Use 500ul of magnetic nanoparticles.
2. Determine needed surface coverage of Oligo per nanoparticle:
In general, Oligo to nanoparticle ratio is 0.7-1.5mg:1mg
3. Mix Oligo with the MagVigen-COOH nanoparticles.
Note: Make total volume 1-2ml.
4. Dissolve 1 vial of EDC in 100ul of PBS buffer.
5. Add EDC solution to Oligo -MagVigen-COOH™ mixture. Incubate for 2-3 hours.
6. Purify MagVigen™- Oligo conjugate by magnetic purification.
7. Wash 1-3 times with Wash Buffer or other buffer solution. Use 2 ml of Wash buffer per wash. Remove non-magnetically captured solution.
Note: One wash could be sufficient for most applications.

Resuspend washed MagVigen™- Oligo conjugates into 2ml of preferred buffer. The final conjugation concentration is 1mg/ml. Ready to use.