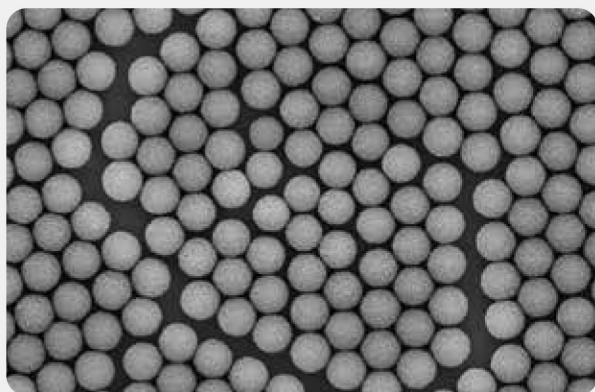


Magnetic Microspheres for Single Cell Sequencing

VDO Biotech's magnetic microspheres have superparamagnetism, moderate magnetic content, excellent resuspension and fast magnetic response speed. The magnetic microspheres are coated with carboxyl/streptavidin, which can efficiently bind aminated derivatives/biotinylated derivatives, and are suitable for adding molecular barcode sequences for cells during single-cell sequencing. Surface groups and particle size can be customized according to users' requirements.



Features

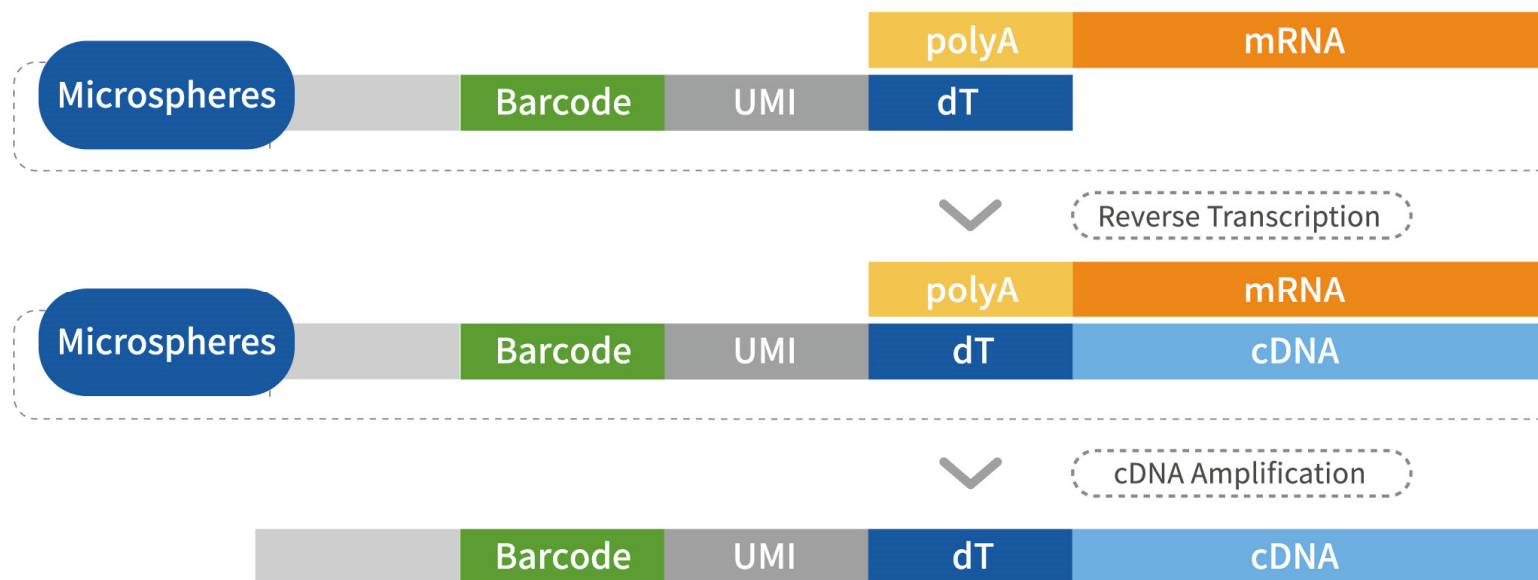
- Superparamagnetic microspheres, outstanding resuspension performance
- Hydrophilic surface, low non-specific adsorption
- Coated with carboxyl/streptavidin, efficiently binds aminated/biotinylated derivatives
- Uniform particle size, the CV is less than 5%, excellent experiment reproducibility
- Large-scale production, batch-to-batch consistency, superior quality with consistent test results



Technical Parameters

- **Composition:** Iron oxide (Fe_3O_4)
- **Particle Size:** 15 μm
- **Surface Groups:** Carboxyl/streptavidin
- **Dispersion medium:** magnetic microsphere preservation solution
- **Suspension time:** 20 minutes
- **Uniformity:** CV<5%
- **Additive:** trace amount of surfactant
- **Storage conditions:** Carboxyl-coated microspheres at 2-25°C, do not freeze; streptavidin-coated microspheres at 2-8°C, do not freeze.

Workflow of Single Cell Capture



Case Study

The magnetic microspheres provided by VDO Biotech assist the customer in the development of single-cell sequencing products with excellent quality and stable technology.

| Sample | Rawreads | Valid Barcodes | Cell Barcode Q30 | UMI Q30 | Filter reads |
|--------|-----------|----------------|------------------|---------|------------------|
| WT11 | 95998650 | 96.52% | 97.81% | 97.94% | 18307965(19.07%) |
| WT12 | 87711720 | 96.23% | 97.31% | 97.31% | 11939878(13.61%) |
| WT13 | 94202231 | 96.36% | 97.83% | 97.83% | 13133532(13.94%) |
| WT14 | 109508782 | 96.44% | 97.86% | 97.86% | 14852887(13.56%) |

WT11: samples using Company C's magnetic microspheres.

WT12-14: samples using VDO Biotech's magnetic microspheres.

From the bioinformatics analysis, the products developed with VDO Biotech's magnetic microspheres achieved the similar results as Company C's products in single-cell analysis and showed excellent performance in single-cell transcriptome sequencing.

Ordering Information

| Cat. No. | Particle Size | Color | Surface Group | Solids | Size |
|-----------|---------------|-----------------|---------------|-----------------------|-------------------|
| NMP1015SA | 15µm | Brownish yellow | SA | 1.0×10^6 /mL | 10ml / 100ml / 1L |
| NMP1015CA | 15µm | Brownish yellow | COOH | 1.0% | 10ml / 100ml / 1L |

Other specifications can be customized upon requests.



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