

FUNCTIONALIZED Particles

Cube Biotech is committed to delivering customized particle functionalization services that precisely match your specifications and address the unique functionality for targeted applications. With the extensive expertise of our experienced researchers, we tailor solutions according to your specific requirements.

For this, we utilize particles made of different materials, shapes, and sizes. We offer controlled functionalization even with a defined number of biomolecules attached to the particle and provide expertise in the conceptual design of particle constructs.

Our service spectrum encompasses particle functionalization with small molecules, proteins, protein-specific antibodies, and nucleic acids, as well as materials ensuring stability in common buffer systems and offering versatility and adaptability across various applications.

Moreover, our state-of-the-art physicochemical characterization ensures high-quality particles at every stage, from proof-of-principle lab-scale development to production on an industrial scale.

In addition to the established classics like PureCube Agarose Beads and PureCube MagBeads, we boast an array of other base materials to meet your particular scientific needs. Nanoparticles made of different noble metals (e.g., gold, silver, platinum), characterized by their unique optical and physical characteristics, offer immense potential for innovation in R&D, including (bio)imaging, protein labeling in TEM, lateral flow assays, etc. For additional details, please explore our website www.cube-biotech.com.



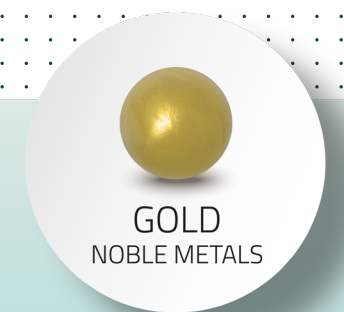
TYPE



MAGBEADS



AGAROSE



GOLD
NOBLE METALS

SIZE &
SHAPE

30 μm 800 μm



Beads

40 μm 800 μm



Beads

5 nm 100 nm



Sphere | Rod | Cube

BASE
MATERIALS

Agarose Beads with
distributed
Ferrimagnetic Particles

Agarose Beads*

Gold (with selected
coating)** |
single-molecule
functionalization possible

COUPLED
MOLECULES
& LIGANDS

Ligands | Natural Ligands | Drugs | Carbohydrates | Cholesterol
Derivatives | Amino Acids | Proteins | Peptides | Antibodies
Click reagents | Fluorophors and Colorants | Activation Group

Nucleic Acids
Antibodies
Fab-fragments | Fluorophores
Biological Tags (e.g. Affinity-Tags)
Polymers | Small Molecules

APPLICATION
AREAS

Protein-specific Purification and Pulldown
(Membrane) Protein Purification
Purification of Carbohydrates
Immobilization of DNA/RNA/Oligonucleotides
Electron Transfer Reagents in Fuel Cells | Molecule Depletion

Imaging
X-ray Imaging
Fluorescence
Photoacoustic Imaging
Optical Imaging

Diagnostic research
Nucleic Acid Detection
Protein Detection e.g.
Lateral Flow Assay

* Others on demand, e.g.: Hollow Agarose, Organic Polymers, Spherical Cellulose/ Carbohydrates
** On demand other noble metals such as silver and platinum possible

Options of particles with our functionalization services