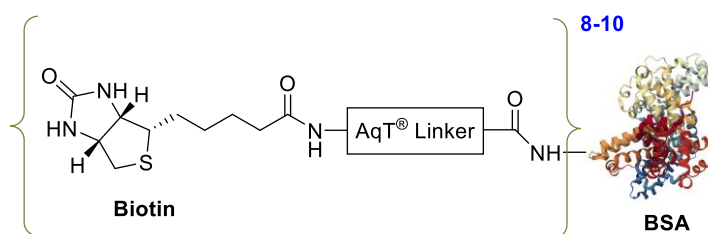


## AqT<sup>®</sup> Biotinylated BSA

Lyophilized powder, 1 mg per vial,  
 ≥99% conjugates by SEC HPLC

Product Number:  
**CM86159**



### Product Description

Biotin is poorly water-soluble and can contribute to aggregation in bioconjugates. Incorporation of the proprietary AqT<sup>®</sup> super-hydrophilic linker into this biotinylated BSA enables high biotin loading while preserving excellent solubility and stability. Our Biotinylated BSA contains 8–10 biotin molecules per BSA, providing enhanced signal amplification, improved assay sensitivity, and greater signal intensity across a range of applications. The hydrophilic AqT<sup>®</sup> linker also helps minimize nonspecific binding, reduce background noise, and prevent aggregation for improved assay performance.

The product is supplied as 1 vial containing 1 mg (Cat# CM86159-1MG). For bulk orders please contact us for a quote.

### Applications and Advantages of Highly Loaded AqT<sup>®</sup> Biotinylated BSA

#### Immunoassays (ELISA)

Ideal for use as capture or detection reagents in ELISA formats. The high biotin loading enhances signal amplification through streptavidin conjugates, improving assay sensitivity and signal intensity, while the hydrophilic AqT<sup>®</sup> linker helps reduce nonspecific binding and background noise.

#### Flow Cytometry

Enables flexible detection using streptavidin-conjugated fluorophores. High biotin density increases fluorescence signal per binding event, while the AqT<sup>®</sup> hydrophilic linker minimizes aggregation and helps preserve protein activity and stability.

#### Immunohistochemistry (IHC) / Immunocytochemistry (ICC)

Compatible with avidin–biotin complex (ABC) detection systems. High biotin labeling improves sensitivity for detecting low-abundance targets, while enhanced hydrophilicity supports improved tissue penetration, reduced background staining, and more uniform signal distribution.

#### Western Blotting

Provides highly sensitive detection with streptavidin-based reporters. Increased biotinylation enhances signal strength and lowers detection limits without compromising specificity or membrane performance.

#### Immunoprecipitation (IP) / Pull-Down Assays

High biotin loading improves capture efficiency on streptavidin-coated beads and supports strong multivalent interactions for stable target recovery. The hydrophilic AqT<sup>®</sup> linker also helps reduce nonspecific interactions and sample aggregation.

#### Biosensor and Surface Immobilization (e.g., SPR, BLI)

Enables robust and stable immobilization on streptavidin-coated sensor surfaces. High biotin density increases surface loading capacity and assay sensitivity, while hydrophilicity improves analyte accessibility, reproducibility, and overall assay performance.

#### Magnetic Bead–Based Assays and Cell Isolation

Supports efficient capture and separation using streptavidin magnetic beads. High labeling density enhances binding capacity and recovery efficiency, while reduced aggregation helps maintain sample integrity and

consistent performance.

#### **Microarrays and Multiplex Assays**

Facilitates dense, stable immobilization of proteins on streptavidin-coated surfaces. High biotin loading improves assay sensitivity and dynamic range, while the AqT<sup>®</sup> hydrophilic linker minimizes spot variability, aggregation, and background interference.

#### **Key Features**

- Lyophilized powder ready to use after reconstitution with water, no need for external buffer.
- High loading with an average of 8 to 10 Biotin molecules per BSA.
- Amount accurately determined by UV/HPLC analysis.
- Advanced AqT<sup>®</sup> linker technology: Utilizes CellMosaic's proprietary, super-hydrophilic, water-soluble, charge-neutral AqT<sup>®</sup> linker to minimize fluorophore stacking and protein aggregation.

#### **Chemical Information**

- **Chemical Name:** AqT<sup>®</sup> Biotinylated BSA
- **Chemical Formula:** N/A
- **Molecular Weight:** ~71KDa
- **CAS Number:** N/A

#### **Specification**

- **Physical Appearance:** white to off-white preservative-free lyophilized powder in a 2.0 mL centrifuge tube
- **Storage Temp:** -20°C
- **Purity:** ≥99% of conjugates by HPLC
- **Amount of Biotin Loaded per BSA Molecule:** 8–10 (refer COA of each lot for actual value)

#### **Storage/Stability**

- Recommended storage of the product is below -20°C
- Expiration before defrosting is 1 year after receiving.
- Once defrosted maintain at 2–8°C.
- For best quality use within 1 week of defrosting.

#### **Important Notes**

##### **For Research Use Only. Not for Use in Human or Diagnostic Procedures.**

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