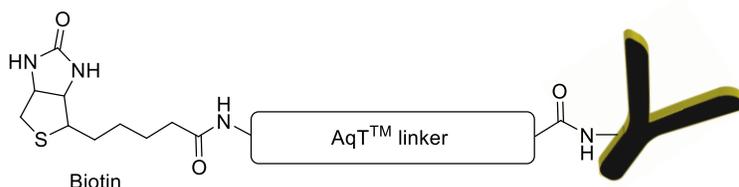


AqueaTether™ (AqT™) Biotin Antibody



Product Description

CellMosaic's AqT™ biotin antibody product is prepared by labeling the surface amines of the antibody with a super-hydrophilic AqT™ linker with exceptional high loading. AqT™ linkers are novel proprietary biomaterials invented at CellMosaic that are chemically assembled from a class of natural and edible sugar alcohol compounds with properties by design.

Biotin is a very hydrophobic molecule. Antibodies labeled with biotin tend to aggregate and precipitate out from solution over time. Using classical linker or direct conjugation in past, we have controlled all antibody biotin labeling to 2–4 biotin per antibody for optimized performance. However, in many cases, high loading of biotin is desirable for enhanced/amplified signal or selection. Using AqT™ linker, antibody can be labeled with a high amount of AqT™ biotin with no change to the properties of the antibody (**Figure 1** and **Figure 2**). The hydroxy (-OH) groups of AqT™ linkers create a microenvironment that shields neighboring biotins from stacking or interacting with one another. All current AqT™ biotin antibody product is prepared with an average 4–6 biotins per antibody.

AqT™ linker used to prepare CellMosaic's AqT™ biotin antibody product is flexible with 15 atoms or longer length. This long flexible hydrophilic spacer prevents the crowding and interaction of streptavidin with the antibody, increasing the sensitivity of detection.

Application Areas

- ELISA, Western Blotting (WB), Enzyme Immunohistochemistry (IHC), Immunocytochemistry (ICC), Immunoprecipitation (IP), flow cytometry.

Key Features of CellMosaic's AqT™ Biotin Antibody

- **High loading** with average 4-6 biotins per antibody
- Proprietary long, flexible, and hydrophilic AqT™ linker
- AqT™ biotin antibody retains the properties of native antibody (hydrodynamic volume, hydrophobicity, and aggregation profiles).
- AqT™ modification greatly reduce the heterogeneity of biotinylated antibody

Figure 1: Overlay of size exclusion HPLC (SEC) analysis of antibody, biotin-antibody (Direct conjugate with biotin, linker length = 0, DOL: 6.9), and AqT™ Biotin antibodies with various loading (15 atom length AqT™ linker).

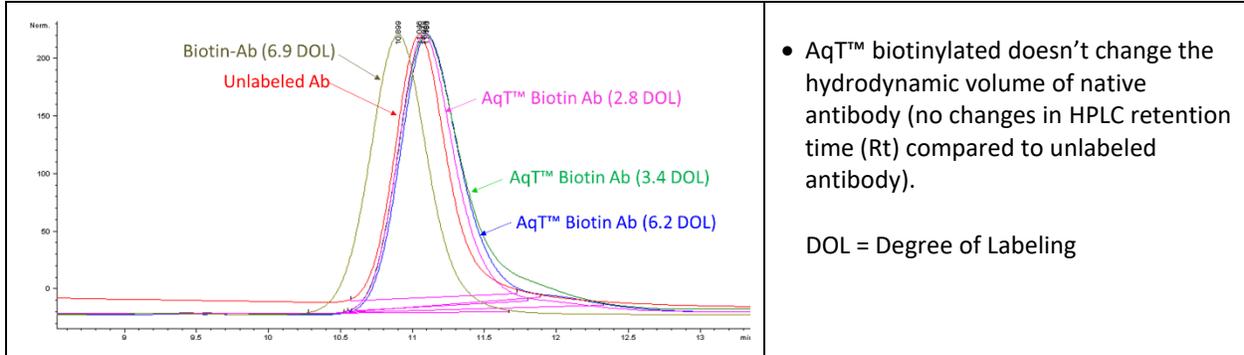
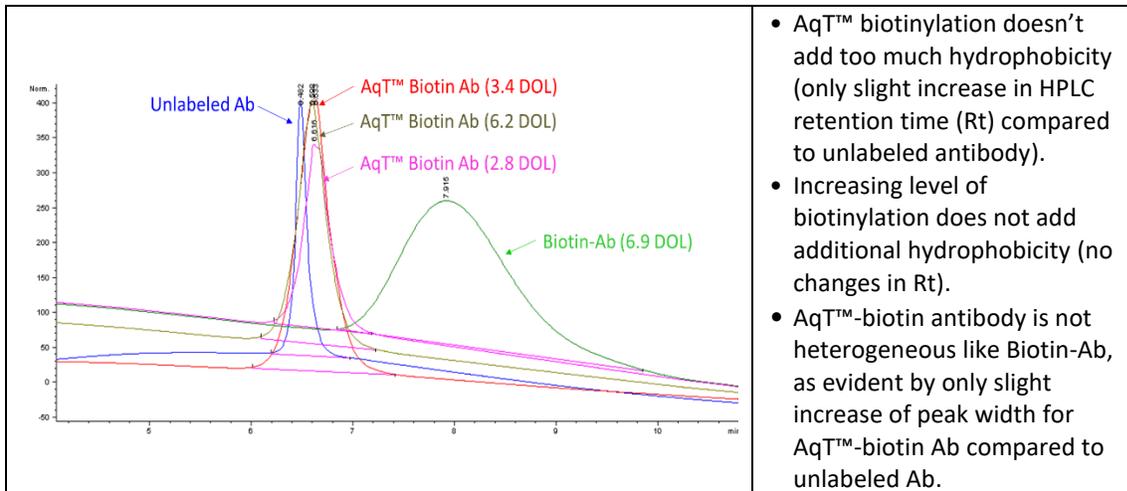


Figure 2: Overlay of hydrophobic interaction (HIC) HPLC profiles of antibody, biotin-antibody (Direct conjugate with biotin, linker length = 0, DOL: 6.9), and AqT™ biotinylated antibodies with various loading (15 atom length AqT™ linker).



Ordering Information for AqT™ Biotin Antibody Products

Product Number	Name
CM86101	AqT™ Biotin Goat Anti-Human IgG, Fcγ Fragment Specific
CM86102	AqT™ Biotin Goat Anti-Human IgG, F(ab') ₂ Specific
CM86103	AqT™ Biotin Goat Anti-Human IgG (H+L)
CM86104	AqT™ Biotin F(ab') ₂ Fragment Goat Anti-Human IgG, Fcγ Fragment Specific