# Synthetic glycol-O-sulfatome for profiling of human natural antibodies

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**Abstract:**

Our understanding of biological role of glycans O-sulfation remains at the level of beginners due to microheterogeneity, lability and other difficulties of exact structural assignment. Partially, problem of functional investigations, especially determination of glycoepitope specificity of carbohydrate-binding proteins could be solved with the help of synthetic glycans of certain structure. Here we summing up our synthetic efforts in creation of synthetic O-sulfatome, and bring together all the synthesized in our group sulfated glycans, both existing in nature, yet undiscovered but biochemically licit, and completely unnatural. All glycans have aminoalkyl spacer group allowing immobilization on a chip. We exemplify the capabilities of O-sulfoglycan microarray (containing >70 ligands) for profiling human natural antibodies; for a number of glycans O-sulfation dramatically changes interaction with human antibodies.

**Full text**:

https://doi.org/10.1016/j.carres.2017.03.015