Free Light Chain (FLC) - Lambda Monoclonal Antibodies: Validation and Performance

Antibodies Overview

Free light chain monoclonal antibodies are essential in diagnostics due to their high specificity and sensitivity, enabling precise detection of kappa and lambda free light chains, which are critical biomarkers for conditions like multiple myeloma and AL amyloidosis. These antibodies facilitate early diagnosis, accurate disease monitoring, and risk stratification by allowing the detection of subtle changes in FLC levels. Used widely in immunoassays such as ELISAs, nephelometry, and turbidimetry, monoclonal antibodies ensure consistency and reliability in clinical results, making them indispensable tools in the diagnosis and management of plasma cell disorders.

Epitope Binning Insight: Unraveling Binding Specificity

Epitope binning is vital for selecting the right antibody pairs in immunoassays. The data below highlights how selecting antibody pairs from distinct epitope bins enhances assay accuracy, sensitivity, and reliability. Antibodies from different bins are less likely to compete or interfere with each other's binding, resulting in minimized background noise and improved precision. This optimized combination of antibodies ensures harmonious interactions, ultimately elevating the overall quality of the immunoassay results.

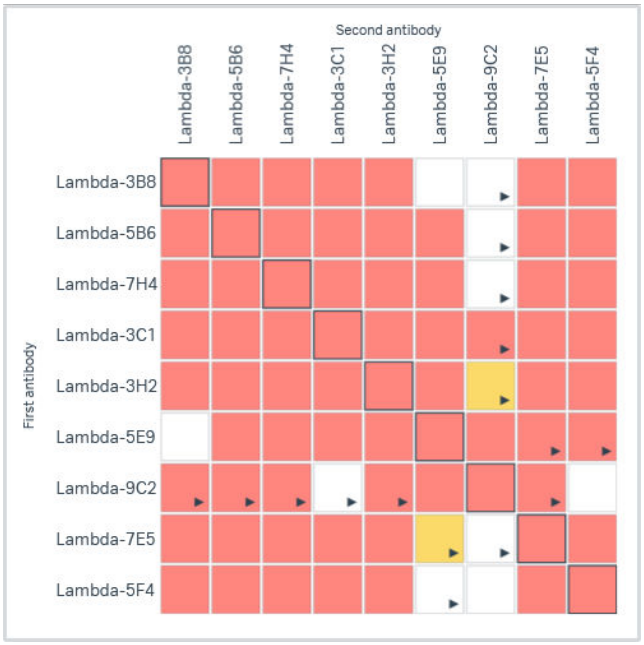

Figure A: Analysis of epitope characterization for antibodies targeting Free light chain - Lambda. The antibodies are categorized into groups based on whether they bind or do not bind. Additionally, the catalog number of each antibody is presented.

Extremely high specificity

Even in presence of a 1000-fold human IgG, it does not interfere with Anti-FLC antibody binding to the Bence Jones free light chains.

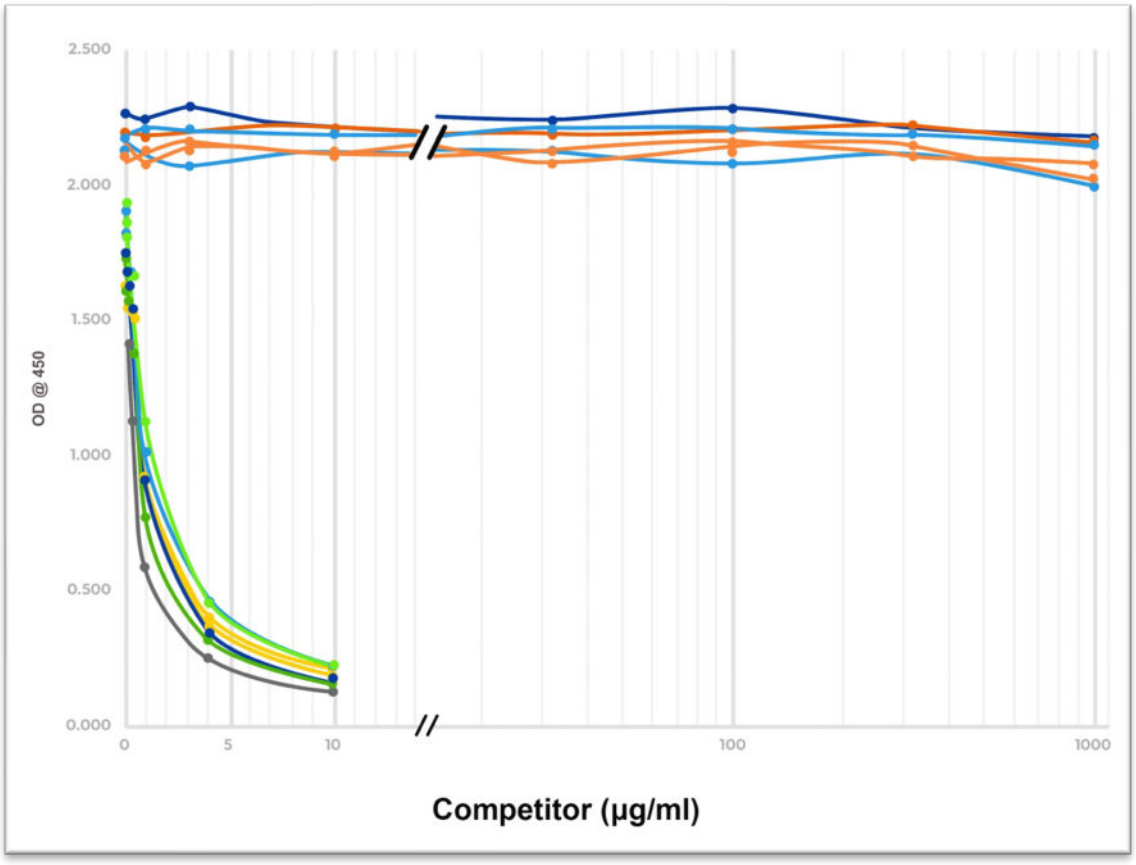

Figure3: Specificity of anti-FLC antibodies: Competitive ELISA in which 1µg/ml of a biotinylated ƙ or λ Bence Jones protein was incubated with different concentrations of competitors, non-biotinylated ƙ or λ Bence Jones protein, as well as purified polyclonal human IgG. Demonstrates no interference in binding to free kappa and lambda in the presence of1mg/ml of human IgG, showcasing high specificity.

Rigorous Quality Control ISO 17025:2017

We make sure our IVD grade antibodies meet the highest standards, and our ISO-controlled production process plays a key role. At every step, from making the antibodies to purifying them, we rigorously test to ensure they are consistent, reliable, and perform well. Following ISO standards means we have set procedures in place that help us maintain consistent quality, making sure every batch is just as good as the last. Our commitment to this process shows how dedicated we are to providing you with antibodies you can trust for your immunoassay need.

Exonbio LLC
5950 Priestly Dr, Suite 101,
Carlsbad, CA 92008

Tel. +1 (760) 814-8078
Email: info@exonbio.com
www.exonbio.com