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(54) Title: ANTI-CD20 ANTIBODIES AND METHODS OF USE

(57) Abstract: Compositions and methods are provided for treating diseases associated with CD20, including lymphomas, autoimmune diseases, and transplant rejections. Compositions include anti-CD20 antibodies capable of binding to a human CD20 antigen located on the surface of a human CD20-expressing cell, wherein the antibody has increased complement-dependent cell-mediated cytotoxicity (CDC) that is achieved by having at least one optimized CDR engineered within the variable region of the antibody. Compositions also include antigen-binding fragments, variants, and derivatives of the monoclonal antibodies, cell lines producing these antibody compositions, and isolated nucleic acid molecules encoding the amino acid sequences of the antibodies. The invention further includes pharmaceutical compositions comprising the anti-CD20 antibodies of the invention, or antigen-binding fragments, variants, or derivatives thereof, in a pharmaceutically acceptable carrier, and methods of use of these anti-CD20 antibodies.