

ANTI-CD30L ANTIBODIES AND USES THEREOF

CROSS-REFERENCE

[0001] This application claims the benefit of U.S. Provisional Patent Application Serial No. 63/150,373 filed February 17, 2021, which is incorporated by reference herein in its entirety.

SEQUENCE LISTING

[0002] The instant application contains a Sequence Listing which has been submitted electronically in ASCII format and is hereby incorporated by reference in its entirety. Said ASCII copy, created on February 14, 2022, is named 56884-786_601_SL.txt and is 256,626 bytes in size.

1. BACKGROUND

[0003] Autoimmune disease occurs when the immune system attacks self-molecules as a result of a breakdown of immunologic tolerance to autoreactive immune cells. Many autoimmune disorders have been strongly associated with genetic, infectious, and/or environmental predisposing factors yielding multiple disorders and symptoms ranging from organ-specific dysfunction to systemic dysfunction. Inflammatory bowel disease (IBD) refers to a collection of intestinal disorders causing inflammatory conditions in the gastrointestinal tract. The primary types of IBD are ulcerative colitis (UC) and Crohn's Disease (CD). These diseases are prevalent, with about 1.86 million people diagnosed globally with UC, and about 1.3 million people diagnosed globally with CD. Severe forms of IBD may result in or be characterized by intestinal fibrosis, which is the accumulation of scar tissue in the intestinal wall. The pathogenesis of IBD is thought to involve an uncontrolled immune response that may be triggered by certain environmental factors in a genetically susceptible host. The heterogeneity of disease pathogenesis and clinical course, combined with the variable response to treatment and its associated side effects, suggests a targeted therapeutic approach to treating these diseases is a desirable treatment strategy. Yet there are very few targeted therapies available to IBD patients, especially those patients who may be non-responsive or lose response to existing IBD therapies.

2. SUMMARY

[0003a] In one aspect, provided herein is an antibody or antigen binding fragment thereof that binds CD30L, wherein the antibody or antigen binding fragment thereof comprises: (a) a

CDR-H1 comprising the amino acid sequence set forth in any one of SEQ ID NOs: - 712-723; (b) a CDR-H2 comprising the amino acid sequence set forth in any one of SEQ ID NOs: - 724-735; (c) a CDR-H3 comprising the amino acid sequence set forth in any one of SEQ ID NOs: - 736-743; (d) a CDR-L1 comprising the amino acid sequence set forth in any one of SEQ ID NOs: - 744-751; (e) CDR-L2 comprising the amino acid sequence set forth in any one of SEQ ID NOs: - 752-759; and/or (f) a CDR-L3 comprising the amino acid sequence set forth in any one of SEQ ID NOs: - 760-765.

[0003b] In another aspect, provided herein is a nucleic acid encoding the antibody or antigen binding fragment thereof as described herein.

[0003c] In another aspect, provided herein is a cell comprising the antibody or antigen binding fragment thereof as described herein or the nucleic acid as described herein.

[0003d] In another aspect, provided herein is use of the antibody or antigen binding fragment thereof as described herein in the manufacture of a medicament for treating an autoimmune disease in an individual in need thereof.

[0003e] In another aspect, provided herein is the antibody or antigen binding fragment thereof as described herein for use in therapy.

[0004] Provided herein are antibodies that bind CD30 ligand (also referred to as CD30L, CD153, TNFSF8) and are useful in the treatment of autoimmune disorders such as IBD.