As reported herein is the antibody as reported herein for use in depleting B-cells.

One aspect as reported herein is the use of the antibody as reported herein in the manufacture of a medicament for the treatment of a disease associated with pathologic increase of B-cells selected from the group consisting of an inflammatory disease, an autoimmune disease, rheumatoid arthritis, lupus and psoriasis.

One aspect as reported herein is the use of the antibody as reported herein in the manufacture of a medicament for the treatment of a B-cell cancer.

In one embodiment the medicament is for the treatment of a B-cell cancer, an inflammatory disease, an autoimmune disease, rheumatoid arthritis, lupus, psoriasis, or a bone disease. In one embodiment the medicament is for the depletion of B-cells.

As reported herein is a method of treating an individual having a B-cell cancer comprising administering to the individual an effective amount of the antibody as reported herein.

As reported herein is a method of depleting B-cells in an individual comprising administering to the individual an effective amount of the antibody as reported herein.

As reported herein is a method for the manufacture of a medicament for the treatment of a disease comprising an antibody as reported herein. In one embodiment the disease is a B-cell cancer, an inflammatory disease, an autoimmune disease, rheumatoid arthritis, lupus, psoriasis, or a bone disease.

As reported herein is an isolated nucleic acid encoding the antibody as reported herein.

As reported herein is a host cell comprising the nucleic acid as reported herein.

As reported herein is a method of producing an antibody comprising culturing the host cell comprising the nucleic acid encoding the antibody so that the antibody is produced, recovering the antibody from the cell or the cultivation medium and purifying the antibody.

As reported herein is an immunoconjugate comprising the antibody as reported herein and a cytotoxic agent.

Patent Claims

1. An antibody that specifically binds to human CD19, wherein the antibody comprises
(a) HVR-H1 comprising the amino acid sequence of SEQ ID NO: 03,
(b) HVR-H2 comprising the amino acid sequence of SEQ ID NO: 11,
(c) HVR-H3 comprising the amino acid sequence of SEQ ID NO: 05,
(d) HVR-L1 comprising the amino acid sequence of SEQ ID NO: 20 or 28,
(e) HVR-L2 comprising the amino acid sequence of SEQ ID NO: 07, and
(f) HVR-L3 comprising the amino acid sequence of SEQ ID NO: 08.

2. The antibody according to claim 1, wherein the antibody is a monoclonal antibody.

3. The antibody according to any one of claims 1 to 2, wherein the antibody is a human, humanized or chimeric antibody.

4. The antibody according to any one of claim 1 to 3, wherein the antibody is an antibody fragment that specifically binds to human CD19.

5. The antibody according to any one of claims 1 to 4, wherein the antibody comprises
(a) a VH sequence having at least 95 % sequence identity to the amino acid sequence of SEQ ID NO: 09 and a VL sequence having at least 95 % sequence identity to the amino acid sequence of SEQ ID NO: 19, or
(b) a VH sequence having at least 95 % sequence identity to the amino acid sequence of SEQ ID NO: 09 and a VL sequence having at least 95 % sequence identity to the amino acid sequence of SEQ ID NO: 27,or
(c) a VH sequence and a VL sequence as in (a) or (b).

6. A pharmaceutical formulation comprising the antibody according to any one of claims 1 to 5 and a pharmaceutically acceptable carrier.

7. The antibody according to any one of claims 1 to 5 for use as a medicament.

8. The antibody according to any one of claims 1 to 5 for use in the treatment of B-cell cancer.

9. Use of the antibody according to any one of claims 1 to 5 in the manufacture of a medicament for the treatment of a disease associated with pathologic increase of B-cells selected from the group consisting of an inflammatory disease, an autoimmune disease, rheumatoid arthritis, lupus and psoriasis.

10. Use of the antibody according to any one of claims 1 to 5 in the manufacture of a medicament for the treatment of a B-cell cancer.