

[28] A method for preventing or treating rheumatoid arthritis or arthritis, systemic lupus erythematosus, lupus nephritis, or graft-versus-host disease, said method comprising administering an effective amount of the anti-PAD4 antibody or the antibody fragment thereof according to any one of [1] – [18] or the pharmaceutical composition according to any one of [22] – [25].

[0013a] An anti-PAD4 antibody or an antibody fragment thereof, wherein heavy chain complementarity determining region (HCDR) 1 comprises an amino acid sequence of SEQ ID NO: 1, HCDR2 comprises an amino acid sequence of SEQ ID NO: 2, HCDR3 comprises an amino acid sequence of SEQ ID NO: 3, light chain complementarity determining region (LCDR)1 comprises an amino acid sequence of SEQ ID NO: 4, LCDR2 comprises an amino acid sequence of SEQ ID NO: 5, and LCDR3 comprises an amino acid sequence of SEQ ID NO: 6.

[0013b] The anti-PAD4 antibody or the antibody fragment thereof as described herein or the pharmaceutical composition as described herein for use as a medicament.

[0013c] Use of the anti-PAD4 antibody or the antibody fragment thereof as described herein or the pharmaceutical composition as described herein in the manufacture of a medicament for preventing or treating rheumatoid arthritis or arthritis, systemic lupus erythematosus, lupus nephritis, or graft-versus-host disease.

ADVANTAGEOUS EFFECTS OF THE INVENTION

[0014]

The present invention provides an anti-PAD4 antibody having excellent properties, and provides an excellent method for preventing or treating RA or arthritis, systemic lupus erythematosus, lupus nephritis, or graft-versus-host disease.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015]

Fig. 1 shows a method for preparing CAIA model mice and an effect of an anti-PAD4 antibody of the present invention on arthritis in the CAIA model.

Fig. 2 shows the effect of an anti-PAD4 antibody of the present invention on arthritis in the CIA model.

Fig. 3 shows the effect of an anti-PAD4 antibody of the present invention on urinary proteins in the cGvHD model.

Fig. 4 shows the effect of an anti-PAD4 antibody of the present invention on the incidence rate in the cGvHD model.

EMBODIMENTS FOR CARRYING OUT THE INVENTION

[0016]

In order to facilitate understanding of the present invention, terms used in the present invention are described below.