[0027] In one embodiment, the present disclosure provides a therapeutic agent for pustular psoriasis or psoriatic erythroderma that is administered to a psoriasis patient that has been administered with an anti-TNF-alpha antibody, comprising an IL-17RA antagonist as an active ingredient. In another embodiment, there is provided a therapeutic agent for psoriasis that is administered to a psoriasis patient that cannot be treated with an anti-TNF-alpha antibody, comprising an IL-17RA antagonist as an active ingredient. In another embodiment, the present disclosure also intended to provide a method for the treatment of pustular psoriasis or psoriatic erythroderma, comprising administering an IL-17RA antagonist to a psoriasis patient that has been administered with an anti-TNF-alpha antibody. In another embodiment, there is provided a method for the treatment of psoriasis, comprising administering an IL-17RA antagonist to a psoriasis patient that cannot be treated with an anti-TNF-alpha antibody. In one aspect, there is provided the use of an anti-IL17RA antibody, an antibody fragment thereof, or an antigen-binding fragment thereof for the manufacture of a medicament, wherein the medicament is to be administered to a psoriasis patient that is ineffective to the anti-TNF-alpha antibody or that is of insufficient tolerability to the anti-TNF-alpha antibody.

Solution to Problem

[0028] The present invention relates to the following (1) to (34).

(1) A therapeutic agent for pustular psoriasis or psoriatic erythroderma that is administered to a psoriasis patient that has been administered with an anti-TNF-alpha antibody, comprising an IL-17RA antagonist as an active ingredient.

(2) The therapeutic agent described in (1), wherein the anti-TNF-alpha antibody is at least one antibody selected from adalimumab, infliximab, certolizumab pegol, certolizumab, and golimumab.

(3) The therapeutic agent described in (1) or (2), wherein the IL-17RA antagonist is an anti-IL-17RA antibody or an antibody fragment thereof.

(4) The therapeutic agent described in (3), wherein the anti-IL-17RA antibody is selected from the following a) and b):

a) a monoclonal antibody in which a complementarity determining region (hereinafter, referred to as CDR)1, CDR2, and CDR3 of a heavy chain variable region (hereinafter, referred to as VH) of the

antibody comprise the amino acid sequences shown in SEQ ID NOs:1, 2, and 3, respectively, and CDR1, CDR2, and CDR3 of a light chain variable region (hereinafter, referred to as VL) of the antibody comprise the amino acid sequences shown in SEQ ID NOs:4, 5, and 6, respectively; and

b) a monoclonal antibody in which VH of the antibody comprises the amino acid sequence shown in SEQ ID NO:7, and VL of the antibody comprises the amino acid sequence shown in SEQ ID NO:8.

(5) The therapeutic agent described in any one of (1) to (4), wherein the clinical global impression (hereinafter, also referred to as CGI) of a patient after administration of the therapeutic agent becomes 2 or 1.

(6) The therapeutic agent described in any one of (1) to (5), wherein psoriasis area and severity index (hereinafter, referred to as PASI) score of a patient after admin-

Claims

[Claim 1] Use of an anti-IL-17RA antibody, an antibody fragment thereof, or an antigen-binding fragment thereof, for the manufacture of a medicament, wherein the medicament is to be administered to a psoriasis patient that is ineffective to the anti-TNF-alpha antibody or that is of insufficient tolerability to the anti-TNF-alpha antibody.

[Claim 2] The use according to claim 1, wherein the anti-TNF-alpha antibody is at least one selected from adalimumab, infliximab, certolizumab pegol, certolizumab, and golimumab.

[Claim 3] The use according to claim 1, wherein the anti-IL-17RA antibody is selected from the following a) and b):

a) a monoclonal antibody in which CDR1, CDR2, and CDR3 of VH of the antibody comprise the amino acid sequences shown in SEQ ID NOs:1, 2, and 3, respectively, and CDR1, CDR2, and CDR3 of VL of the antibody comprise the amino acid sequences shown in SEQ ID NOs:4, 5, and 6, respectively; and

b) a monoclonal antibody in which VH of the antibody comprises the amino acid sequence shown in SEQ ID NO:7, and VL of the antibody comprises the amino acid sequence shown in SEQ ID NO:8.

[Claim 4] The use according to any one of claims 1 to 3, wherein the psoriasis is at least one selected from psoriasis vulgaris, psoriasis arthropica, pustular psoriasis, psoriatic erythroderma, and psoriasis guttata.

[Claim 5] The use according to any one of claims 1 to 4, wherein the clinical global impression(CGI) of a patient after the administration of the anti-IL-17RA antibody, the antibody fragment thereof, or the antigen-binding fragment thereof becomes 2 or 1.

[Claim 6] The use according to any one of claims 1 to 5, wherein the Psoriasis Area and Severity Index (PASI) score of a patient after the administration of the anti-IL-17RA antibody, the antibody fragment thereof, or the antigen-binding fragment thereof is lower than that before the administration of the antagonist.

[Claim 7] The use according to any one of claims 1 to 6, wherein the anti-IL-17RA

antibody, the antibody fragment thereof, or the antigen-binding fragment thereof is to be administered in a dose of 140 mg or more.

[Claim 8] The use according to any one of claims 1 to 7, wherein the anti-IL-17RA antibody, the antibody fragment thereof, or the antigen-binding fragment thereof is to be administered in a dose of 140 mg or 210 mg.

[Claim 9] The use according to any one of claims 1 to 8, wherein the anti-IL-17RA antibody, the antibody fragment thereof, or the antigen-binding fragment thereof is to be administered in a dose of 140 mg or 210 mg on the 1st day, the 1st week and the 2nd week, and thereafter once every two weeks.