## Claims

1. A humanized antibody that specifically binds to IL-1R3, or a fragment or derivative thereof that contains at least a portion of said antibody that is sufficient to confer IL-1R3 binding specificity, wherein the humanized antibody, antibody fragment or antibody derivative thereof is derived from a non-humanized antibody, antibody fragment or antibody derivative comprising complementarity determining regions (CDRs):

CDR-H1, CDR-H2, and CDR-H3 of a heavy chain variable (VH) region according to SEQ ID NO: 28; and

CDR-L1 and CDR-L2 of a light chain variable (VL) region according to SEQ ID NO: 62, and CDR-L3 comprising a paratope of amino acids YII.

2. The humanized antibody, antibody fragment or antibody derivative thereof according to claim 1, comprising:

a VH region comprising framework regions at least 95% identical to those of SEQ ID NO: 28; and

a VL region comprising framework regions at least 95% identical to those of SEQ ID NO: 62.

3. The humanized antibody, antibody fragment or antibody derivative thereof according to claim 1 or claim 2, comprising:

a VH region comprising framework regions at least 99% identical to those of SEQ ID NO: 28; and

a VL region comprising framework regions at least 99% identical to those of SEQ ID NO: 62.

4. The humanized antibody, antibody fragment or antibody derivative thereof according to any one of the previous claims, that inhibits IL-1R3 induced NFkB activity.

5. The humanized antibody, antibody fragment or antibody derivative thereof according to any one of the previous claims, wherein said antibody inhibits IL-1alpha, IL-1beta, IL-33, and/or IL-36 stimulated NFkB activity.

6. The humanized antibody, antibody fragment or antibody derivative thereof according to any one of the previous claims, wherein said antibody inhibits NFkB activity stimulated by a complex selected from the group consisting of IL-1β/IL-1R1/IL-1RAcP, IL-1α/IL-1R1/IL-1RAcP IL-33/ST2/IL-1RAcP, and/or IL-36/Il-36R/IL-1RAcP.

7. The humanized antibody, antibody fragment or antibody derivative thereof according to any one of the previous claims, wherein said antibody inhibits in a concentration of 10 µg/ml NFkB expression in A549-NFkB-RE-Luc cell lysates stimulated with 0.1 ng/ml human IL-1alpha, human IL-1beta, IL-33 and/or IL-36, for 50% or more, preferably for 60% or more, preferably for 70% or more, preferably for 80% or more, preferably for 90% and more, and more preferably for 95% or more, related to the same assay without said antibody.

8. The humanized antibody, antibody fragment or antibody derivative thereof according to any one of the previous claims, wherein said antibody inhibits IL-1alpha, IL-1beta, IL-33, and/or IL-36, respectively, stimulated luciferase activity in HEK293T/17 cells transfected with luciferase under control of NF-kB reporter gene.

9. The humanized antibody, antibody fragment or antibody derivative thereof according to any one of the previous claims, wherein said antibody comprises at least amino acid substitutions at L234A and L235A of the human IgG1 Fc region or S228P and L235E of the human lgG4 Fc region.

10. Use of the humanized antibody, antibody fragment or antibody derivative thereof according to any one of the previous claims in the manufacture of a medicament for treating an IL-1R3 mediated disease.

11. The use according to claim 10, wherein the IL-1R3 mediated disease is selected from the group consisting of lung cancer, non-small cell lung (NSCL) cancer, bronchioloalviolar cell lung cancer, bone cancer, pancreatic cancer, skin cancer, cancer of the head or neck, cutaneous or intraocular melanoma, uterine cancer, ovarian cancer, rectal cancer, cancer of

the anal region, stomach cancer, gastric cancer, colon cancer, breast cancer, or uterine cancer.

12. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a therapeutically effective amount of the humanized antibody, antibody fragment or antibody derivative thereof according to any one of claims 1 to 9.

13. Use of the pharmaceutical composition according to claim 12 in the manufacture of a medicament for treating an IL-1R3 mediated disease.

14. The use according to claim 13, wherein the IL-1R3 mediated disease is selected from the group consisting of: lung cancer, non-small cell lung (NSCL) cancer, bronchioloalviolar cell lung cancer, bone cancer, pancreatic cancer, skin cancer, cancer of the head or neck, cutaneous or intraocular melanoma, uterine cancer, ovarian cancer, rectal cancer, cancer of the anal region, stomach cancer, gastric cancer, colon cancer, breast cancer, or uterine cancer.

15. Use of the humanized antibody, antibody fragment or antibody derivative thereof according to any one of claims 1 to 9 or pharmaceutical composition according to claim 12, in the manufacture of a medicament for treating cancer in combination with one or more cytotoxic, cytostatic or targeted anti-cancer compounds.

16. Use of the humanized antibody, antibody fragment or antibody derivative thereof according to any one of claims 1 to 9 or pharmaceutical composition according to claim 12, and one or more cytotoxic, cytostatic or targeted anti-cancer compounds in the manufacture of a medicament for treating cancer.

17. Use of one or more cytotoxic, cytostatic or targeted anti-cancer compounds in the manufacture of a medicament for treating cancer in combination with the humanized antibody, antibody fragment or antibody derivative thereof according to any one of claims 1 to 9 or pharmaceutical composition according to claim 12.