

Claims

1. Use of a complete antibody molecule having full length heavy and light chains in the manufacture of a drug for treating an inflammatory disorder ~~or an autoimmune disease~~ in a human patient, wherein the antibody molecule is specific for IL-13R α 1 and comprises a VH sequence of SEQ ID NO: 51 ~~or a sequence at least 95% identical thereto~~, and VL sequence of SEQ ID NO: 53 ~~or a sequence at least 95% identical thereto~~, wherein multiple doses of the drug are to be administered subcutaneously and exhibit target mediated drug deposition to maintain the lowest concentration of drug serum levels in the range 0.5 to 10mg/L between doses, so as to inhibit IL-13R α 1 and to maintain a pharmacodynamic effect of STAT6 signalling inhibition and IL-13 receptor occupancy for a period of 14 to 30 days, wherein each dose of the drug comprises ~~200-300~~ to 600 mg of said antibody molecule, ~~and~~ wherein a dose is to be administered once or twice a month; and wherein the inflammatory disorder is selected from the group comprising: fibrosis; heart disease, Hodgkin's disease, ulcerative colitis, Chron's disease, atopic dermatitis, eosinophilic esophagitis, allergic rhinitis, asthma and chronic pulmonary disease, and allergy.
2. The use according to claim 1, wherein the antibody binds to the epitope FFYQ.
3. The use according to any one of claims 1 to 2, wherein each dose is 300 mg.
4. The use according to any one of claims 1 to 2, wherein each dose is 400 mg.
5. The use according to any one of claims 1 to 2, wherein each dose is 600 mg.
- ~~6. The use according to any one of claims 1 to 5, wherein the antibody is to be administered subcutaneously.~~
- ~~7.6.~~ The use according to any one of claims 1 to ~~65~~, wherein the antibody is to be administered as a pharmaceutical formulation, ~~such as a parenteral formulation.~~
- ~~8.7.~~ The use according to claim ~~76~~, wherein the formulation comprises:
 - 100 to 200 mg/ml of the IL-13R antibody ~~or binding fragment thereof~~ (for example 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120, 125, 130, 135, 140, 145, 150, 155, 160, 165, 170, 175, 180, 185, 190, 195, or 200 mg/ml);
 - 50 mM to 200 mM of arginine (for example 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120, 125, 130, 135, 140, 145, 150, 155, 160, 165, 170, 175, 180, 185, 190, 195, or 200 mM, such as 100 mM arginine);
 - 15 to 25 mM histidine buffer, for example 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 and 25, such as 20 mM histidine buffer; 0.01-0.03% of a non-ionic surfactant, such as 0.02% w/v; and
 - wherein the pH of the formulation is in the range 5.5 to 7.5 for example 6.2 to 7.2 (such as 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 7.0, 7.1, 7.2), such as 6.5 to 7.0, in particular 6.4 to 6.9).
- ~~9.8.~~ The use according to claims ~~7-6~~ or ~~87~~, wherein the osmolarity of the formulation is in the range 250 to 550 mOsm/kg, for example 250, 255, 260, 265, 270, 275, 280, 285, 290, 295, 300, 305, 310, 315, 320, 325, 330, 335, 340, 345, 350, 355, 365, 370, 375, 380, 385, 390, 395, 400, 405, 410, 415, 420, 425, 430, 435, 440, 445, 450, 455, 460, 465, 470, 475, 480, 485, 490, 495, 500, 505, 515, 520, 525, 530, 535, 540, 545, 550, such as 405 to 435 mOsm/kg.

10.9. The use according to any one of claims ~~7-6~~ to ~~98~~, wherein the formulation further comprises 50 to 200 mM of a sugar, for example 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120, 125, 130, 135, 140, 145, 150, 155, 160, 165, 170, 175, 180, 185, 190, 195, 200, such as 180 mM sugar.

- ~~11.10.~~ The use according to any one of claims ~~7-6~~ to ~~109~~, wherein the pH 6.2 to 6.8, for example 6.2, 6.3, 6.4, 6.5, 6.6, 6.7 or 6.8, in particular 6.5.
- ~~12.11.~~ The use according to any one of claims ~~7-6~~ to ~~1110~~, wherein the formulation does not comprise NaCl.
- ~~13.12.~~ The use according to any one of claims ~~7-6~~ to ~~1110~~, wherein the formulation comprises 50 to 150 mM of NaCl, for example 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120, 125, 130, 135, 140, 145, 150, such as 62.5 or 140 mM NaCl.
- ~~14.13.~~ The use according to any one of claims 1 to ~~1312~~, wherein the heavy chain has the sequence shown in SEQ ID NO: 59.
- ~~15.14.~~ The use according to claim ~~1413~~, wherein the light chain has the sequence shown in a sequence selected from SEQ ID NO: 62, 63 and 55.
- ~~16.~~ The method according to any one of claims 1 to 15, wherein the inflammatory disorder is selected from the group comprising: ~~fibrosis (including pulmonary fibrosis, such as cystic fibrosis, idiopathic pulmonary fibrosis, progressive massive fibrosis; liver fibrosis, such as cirrhosis; heart disease, such as atrial fibrosis, endomyocardial fibrosis, old myocardial infarction; arthrofibrosis; Dupuytren's contracture; keloid fibrosis; mediastinal fibrosis; myelofibrosis; nephrogenic systemic fibrosis; retroperitoneal fibrosis; and scleroderma) Hodgkin's disease, ulcerative colitis, Chron's disease, atopic dermatitis, eosinophilic esophagitis, allergic rhinitis, asthma and chronic pulmonary disease (including chronic obstructive pulmonary disease), and allergy f(or example a peanut), in particular asthma.~~
- ~~17.~~ The use according to any one of claims 1 to 15, wherein the inflammatory disorder is dermatitis.
- ~~18.15.~~ The use according to any one of claims 1 to 14, wherein the inflammatory disorder is atopic dermatitis.
- ~~19.16.~~ The use according to any one of claims 1 to ~~1815~~, wherein the antibody is to be administered as a monotherapy.
- ~~20.17.~~ The use according to any one of claims 1 to ~~1915~~, wherein the antibody is to be administered as a combination therapy, for example in combination with an anti-inflammatory agent.