Supplementary Appendix

Supplementary Table 1: List of Independent Ethics Committees or Institutional Review Boards (MEASURE 5 study)

Centre Number	Ethics Committee or Institutional Review Board	Investigator Name	Department / Organization	City, Country
1001	Ethics Committee of Chinese PLA General Hospital	Prof. Feng Huang	Chinese PLA General Hospital	Beijing 100853, China
1002	Ethics Committee of Peking Union Medical College Hospital	Dr. Mengtao Li	Peking Union Medical College Hospital	Beijing 100005, China
1003	Ethics Committee of China-Janpan Friendship Hospital	Dr. Xin Lu	China-Japan Friendship Hospital	Beijing, 100029, China
1005	Ethics Committee of Shanghai Guanghua Integrated traditional Chinese and Western Medicine Hospital	Prof. Dongyi He	Shanghai Guanghua Integrated traditional Chinese and Western Medicine Hospital	Shanghai 200052, China
1006	Ethics Committee of Guangdong General Hospital	Prof. Xiao Zhang	Guangdong General Hospital	Guangzhou, Guangdong, 510080, China
1007	Human research EC of The Second Affiliated Hospital of Zhejiang University School of Medicine	Prof. Huaxiang Wu	The Second Affiliated Hospital of Zhejiang University School of Medicine	Hangzhou, Zhejiang, 310009, China
1008	Ethics Committee of Jiangsu Province Hospital	Prof. Dr. Miaojia Zhang	Jiangsu Province Hospital	Nanjing, Jiangsu, 210029, China

Centre Number	Ethics Committee or Institutional Review Board	Investigator Name	Department / Organization	City, Country
1009	Ethics Committee of West China Hospital, Sichuan University	Dr. Yi Liu	West China Hospital, Sichuan University	Chengdu, Sichuan, 610041, China
1010	Ethics Committee of Xiangya Hospital Central South University	Prof. Xiaoxia Zuo	Xiangya Hospital Central South University	Changsha, Hunan, 410008, China
1011	Ethics Committee of the 2nd Xiangya Hospital of Central South University	Prof. Jinwei Chen	The Second Xiangya Hospital of Central South University	Changsha, Hunan, 410011, China
1012	Ethics Committee of The 1st Affiliated Hospital of Xian Jiaotong University	Prof. Lan He	The First Affiliated Hospital of The Xi'an JiaoTong University	Xian, Shaanxi, 710061, China
1013	Ethics Committee of People's Hospital of Xinjiang Uygur Autonomous Region	Prof. Lijun Wu	People's Hospital of Xinjiang Uygur Autonomous Region	Urumqi, Xinjiang , 830002, China
1014	Ethics Committee of Ningbo First Hospital	Dr. Xiafei Xin	Ningbo First Hospital	Ningbo, Zhejiang, 315010, China
1015	Ethics Committee of Tianjin Medical University General Hospital	Dr. Wei Wei	Tianjin Medical University, General Hospital	Tianjin, Tianjin, 300052, China
1016	Ethics Committee of Sun yat-sen Memorial Hospital, Sun yat-sen	Dr. Lie Dai	SUN YAT-SEN Memorial Hospital, Sun YAT-SEN	Guangzhou, Guangdong, 510120, China

Centre Number	Ethics Committee or Institutional Review Board	Investigator Name	Department / Organization	City, Country
	university		University	
1017	Ethics Committee of The Second Affiliated Hospital of Shanxi Medical University	Dr. Xiaoxia Wang	The Second Affiliated Hospital of Shanxi Medical University	Taiyuan, Shanxi, 030001, China
1018	Ethics Committee of The First Affiliated Hospital of AnHui Medical University	Dr. Shengqian Xu	The First Affiliated Hospital of AnHui Medical University	Hefei, Anhui, 230022, China
1019	Ethics Committee of Anhui Provincial Hospital	Dr. Xiaomei Li	Anhui Provincial Hospital	Hefei, Anhui, 230001, China
1021	Ethics Committee of Huashan Hospital Affiliated to Fudan University	Dr. Weiguo Wan	Huashan Hospital Affiliated to Fudan University	Shanghai, Shanghai, 200041, China
1022	Ethics Committee of Tongji Hospital, Tongji Medical College of Huazhong, University of Science and Technology	Dr. Lingli Dong	Tongji Hospital, Tongji Medical College of Huazhong, University of Science and Technology	Wuhan, Hubei, 430030, China
1023	Ethics Committee of Shanghai Changhai Hospital	Prof. Dongbao Zhao	Shanghai Changhai Hospital	Shanghai, Shanghai, 200433, China
1024	Ethics Committee of The First Affiliated Hospital ofnXiamen University	Dr. Guixiu Shi	The First Affiliated Hospital of Xiamen	Xiamen, Fujian, 361003, China

Centre Number	Ethics Committee or Institutional Review Board	Investigator Name	Department / Organization	City, Country
			University	
1025	Ethics Committee of Renji Hospital Shanghai Jiaotong University, School of Medicine	Dr. Nan Shen	Renji Hospital Shanghai Jiaotong, University School of Medicine	Shanghai, Shanghai, 200127, China
1026	Ethics Committee of The First Affiliated Hospital of Bengbu Medical University	Dr. Zhijun Li	The First Affiliated Hospital of Bengbu Medical University	Bengbu, Anhui, 233004, China
2001	Ethics Committee of the Institute for Clinical and Experimental Medicine and Thomayer Hospital	Dr. Eva Dokoupilova	Thomayerova nemocnice	Videnska 800, Praha, 140 59, Czech Republic
2002	Ethics Committee of the Institute for Clinical and Experimental Medicine and Thomayer Hospital	Dr. Jan Rosa	Thomayerova nemocnice	Videnska 800, Praha, 140 59, Czech Republic
2003	Eticka komise Revmatologickeho ustavu	Doc. MUDr. Ladislav Senolt		Na Slupi 4, Praha 2, 128 50, Czech Republic
2004	Ethics Committee of the Institute for Clinical and Experimental Medicine and Thomayer Hospital	Dr. Dagmar Galatikova	Thomayerova nemocnice	Videnska 800, Praha, 140 59, Czech Republic
2005	Ethics Committee of the Institute for Clinical and Experimental Medicine and	Dr Ladislav Bortlik	Thomayerova nemocnice	Videnska 800, Praha, 140 59, Czech Republic

Centre Number	Ethics Committee or Institutional Review Board	Investigator Name	Department / Organization	City, Country
	Thomayer Hospital			
3001	Hanyang University, Medical Center IRB	Dr. Tae Hwan Kim	IRB	222, Wangsimni-ro, Seongdong-gu, Seoul, 04763, Korea, Republic of
3003	Seoul National University, Hospital IRB	Prof. Eun Young Lee	IRB	101, Daehak-ro, Jongnogu, Seoul, 03080, Korea, Republic of
3004	Gachon University Gil, Medical Center IRB	Prof. Han Joo Baek	IRB	21, Namdong-daero 774beon-gil, Namdong-gu, Incheon, 21565, Korea, Republic of
3005	The Catholic University of Korea Seoul St. Mary's Hospital IRB	Prof. Ji Hyeon Ju	Bristol Research Ethics Committee Centre, Level 3. Block B	222, Banpo-daero, Seocho-gu, Seoul, 06591, Korea, Republic of
3006	Pusan National University, Hospital IRB	Dr. Seung Geun Lee	IRB	179, Gudeok-ro, Seo-gu, Busan, 49241, Korea, Republic of
3007	Chonnam National, University Hospital IRB	Dr. Taejong Kim		42, Jebong-ro, Dong-gu, Gwangju, Gwangju, 61469, Korea, Republic of

Centre Number	Ethics Committee or Institutional Review Board	Investigator Name	Department / Organization	City, Country
4001	National Research Ethics Service Committee South Central - Hampshire B Research Ethics Committee	Dr. Chee Seng Yee	Bristol Research Ethics Committee Centre, Level 3. Block B	Whitefriars, Level 3, Block B, Lewin's Mead, Bristol, BS1 2NT, United Kingdom
4002	National Research Ethics Service Committee South Central - Hampshire B Research Ethics Committee	Dr. Karl Gaffney	Bristol Research Ethics Committee Centre, Level 3. Block B	Whitefriars, Level 3, Block B, Lewin's Mead, Bristol, BS1 2NT, United Kingdom
4004	National Research Ethics Service Committee South Central - Hampshire B Research Ethics Committee	Dr. Antoni Chan	Bristol Research Ethics Committee Centre, Level 3. Block B	Whitefriars, Level 3, Block B, Lewin's Mead, Bristol, BS1 2NT, United Kingdom
4005	National Research Ethics Service Committee South Central - Hampshire B Research Ethics Committee	Dr. Raj Sengupta	Bristol Research Ethics Committee Centre, Level 3. Block B	Whitefriars, Level 3, Block B, Lewin's Mead, Bristol, BS1 2NT, United Kingdom
4006	National Research Ethics Service Committee South Central - Hampshire B Research Ethics Committee	Dr. Voon Ong	Bristol Research Ethics Committee Centre, Level 3. Block B	Whitefriars, Level 3, Block B, Lewin's Mead, Bristol, BS1 2NT, United Kingdom
4008	National Research Ethics Service Committee South Central - Hampshire B	Dr. Easwaradhas Gladston Chelliah	Bristol Research Ethics Committee Centre, Level 3.	Whitefriars, Level 3, Block B, Lewin's Mead, Bristol, BS1 2NT, United

Centre Number	Ethics Committee or Institutional Review Board	Investigator Name	Department / Organization	City, Country
	Research Ethics Committee		Block B	Kingdom
4009	National Research Ethics Service Committee South Central - Hampshire B Research Ethics Committee	Dr. Philip Helliwell	Bristol Research Ethics Committee Centre, Level 3. Block B	Whitefriars, Level 3, Block B, Lewin's Mead, Bristol, BS1 2NT, United Kingdom
4010	National Research Ethics Service Committee South Central - Hampshire B Research Ethics Committee	Dr. Christopher Edwards	Bristol Research Ethics Committee Centre, Level 3. Block B	Whitefriars, Level 3, Block B, Lewin's Mead, Bristol, BS1 2NT, United Kingdom
4011	National Research Ethics Service Committee South Central - Hampshire B Research Ethics Committee	Dr. Yusuf Patel	Bristol Research Ethics Committee Centre, Level 3. Block B	Whitefriars, Level 3, Block B, Lewin's Mead, Bristol, BS1 2NT, United Kingdom

Supplementary Table 2: Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
1. Patients able to understand and communicate with the investigator and comply with the requirements of the study and give a written, signed, and dated informed consent before any study assessment was performed 2. Male or non-pregnant, non-lactating female patients at least 18 years of age 3. Diagnosis of moderate to severe ankylosing spondylitis (AS) with prior documented radiologic evidence (x-ray or radiologist's report) fulfilling the Modified New York criteria for AS 4. Active AS assessed by Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) ≥4 (0-10) at baseline 5. Spinal pain as measured by BASDAI question #2 ≥4 cm (0-10 cm) at baseline 6. Total back pain as measured by visual analog score ≥40 mm (0-100 mm) at baseline 7. Patients should have had inadequate response or failure to respond to at least 2 non-steroidal anti-inflammatory drugs (NSAIDs) at an approved dose for a minimum of 4 weeks in total and a minimum of 2 weeks for each NSAID prior to randomization, or less than 4 weeks if therapy had to be withdrawn due to intolerance, toxicity or contraindications 8. Patients who were regularly taking NSAIDs (including cyclooxygenase (COX-1 or COX-2) inhibitors)) as part of their AS therapy were required to be on a stable dose	1. Chest x-ray or Magnetic Resonance Imaging with evidence of ongoing infectious or malignant process obtained within 3 months of screening and evaluated by a qualified physician 2. Patients with total ankylosis of the spine 3. Patients taking high potency opioid analgesics (e.g., methadone, hydromorphone, morphine) 4. Previous exposure to secukinumab or any other biologic drug directly targeting interleukin (IL)-17 or the IL-17 receptor 5. Use of any investigational drug and/or devices within 4 weeks of randomization or a period of 5 half-lives of the investigational drug, whichever was longer 6. History of hypersensitivity to the study drug or its excipients or to drugs of similar chemical classes 7. Any therapy by intra-articular injections (e.g., corticosteroid) within 4 weeks before randomization 8. Any intramuscular corticosteroid injection within 2 weeks before randomization 9. Patients previously treated with any biological immuno-modulating agents except for those targeting tumor necrosis factor α (TNFα) 10. Patients who had taken more than one anti-TNFα agent 11. Previous treatment with any cell-depleting therapies, including but not limited to anti-CD20, investigational agents (e.g., CAMPATH, anti-CD4, anti-CD5, anti-CD3, anti-CD19) 12. Traditional Chinese medicine treatment for

for at least 2 weeks before randomization

9. Patients who had been on a TNFα inhibitor (not more than one) must have had experienced an inadequate response to previous or current treatment given at an approved dose for at least 3 months prior to randomization or had been intolerant to at least one administration of an anti-TNFα agent

10. Patients who had previously been on a TNFα inhibitor were allowed to entry into study after an appropriate wash-out period prior to randomization:

a. Four weeks for Enbrel® or "Yi Sai Pu"® (etanercept) – with a terminal half-life of 102 ±30 hours (s.c. route)

b. Eight weeks for Remicade® (infliximab) – with a terminal half-life of 8.0-9.5 days (s.c. route)

c. Ten weeks for Humira® (adalimumab) – with a terminal half-life of 10-20 days (average 2 weeks) (s.c. route)

d. Ten weeks for Simponi® (golimumab) – with a terminal half-life of 11-14 days

e. Ten weeks for Cimzia® (certolizumab) – with a terminal half-life of 14 days

11. Patients taking MTX (≤25 mg/week) or sulfasalazine (≤3 g/day) were allowed to continue their medication and must have taken it for at least 3 months and have been on a stable dose for at least 4 weeks prior to randomization

12. Patients on methotrexate (MTX) had to be on stable folic acid supplementation before randomization

13. Patients who were on a disease-modifying anti-rheumatic drug (DMARD) other than MTX or sulfasalazine must have AS 4 weeks before randomization

13. Pregnant or nursing (lactating) women, where pregnancy was defined as the state of a female after conception and until the termination of gestation, confirmed by a positive human chorionic gonadotropin (hCG) laboratory test

14. Women of child-bearing potential, defined as all women physiologically capable of becoming pregnant, unless they were using effective methods of contraception during the entire study or longer if required by locally approved prescribing information (e.g., 20 weeks in EU)

15. Active ongoing inflammatory diseases other than AS that might confound the evaluation of the benefits of secukinumab therapy, including inflammatory bowel disease or uveitis

16. Underlying metabolic, hematologic, renal, hepatic, pulmonary, neurologic, endocrine, cardiac, infectious or gastrointestinal conditions which in the opinion of the investigator immunocompromised the subject and/or places the subject at unacceptable risk in case of use of immuno-modulatory therapy

17. Significant medical problems or diseases, including but not limited to the following: uncontrolled hypertension (≥160/95 mmHg), congestive heart failure (New York Heart

Association status of class III or IV), uncontrolled diabetes or very poor functional status precluding ability to perform self-care

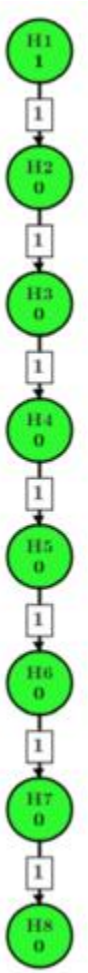
18. History of clinically significant liver disease or liver injury indicated by abnormal liver function tests, such as SGOT (AST), SGPT (ALT), alkaline phosphatase, and serum bilirubin. The investigator was to be guided by the following criteria:

a. Any single parameter may not exceed 2 x the upper limit of normal (ULN). A single parameter elevated up to and including 2 x

discontinued the DMARD 4 weeks prior to randomization, except for leflunomide, which had to be discontinued for 8 weeks prior to randomization unless a cholestyramine washout had been performed 14. Patients taking systemic glucocorticoids had to be on a stable dose of ≤10 mg/day prednisone or equivalent for at least 2 weeks before randomization	ULN should be re-checked once more as soon as possible, and in all cases, at least prior to enrollment/randomization, to rule out laboratory error b. If the total bilirubin concentration is increased above 2 x ULN, total bilirubin should be differentiated into direct and indirect reacting bilirubin 19. History of renal trauma, glomerulonephritis, or patients with one kidney only, or a serum creatinine level exceeding 1.5 mg/dl (132.6 µmol/L) 20. Screening total WBC count <3,000/µl, or platelets <100,000/µl or neutrophils <1,500/µl or hemoglobin <8.5 g/dl (85 g/L) 21. Active systemic infections during the last 2 weeks (exception: common cold) prior to randomization 22. History of ongoing, chronic or recurrent infectious disease or evidence of tuberculosis infection as defined by either a positive purified protein derivative (PPD) skin test (the size of induration was measured after 48-72 hours, and a positive result was defined as an induration of ≥5 mm or according to local practice/guidelines) or a positive QuantiFERON TB-Gold test. Patients with a positive test were allowed to participate in the study if further work up (according to local practice/guidelines) established conclusively that the patient had no evidence of active tuberculosis. If presence of latent tuberculosis was established, then treatment according to local country guidelines had to be initiated 23. Known infection with HIV, hepatitis B, or hepatitis C at screening or randomization 24. History of lymphoproliferative disease or any known malignancy or history of malignancy of any organ system within the past 5 years (except for basal cell carcinoma or actinic keratosis that

	had been treated with no evidence of recurrence in the past 3 months, in situ carcinoma of the cervix or non-invasive malignant colon polyps that had been removed) 25. Current severe progressive or uncontrolled disease which in the judgment of the clinical investigator rendered the subject unsuitable for the trial 26. Inability or unwillingness to undergo repeated venipuncture (e.g., because of poor tolerability or lack of access to veins) 27. Any medical or psychiatric condition which, in the investigator's opinion, would preclude the participant from adhering to the protocol or completing the study per protocol 28. Blood donation or loss of 400 mL or more blood within 8 weeks before dosing 29. History or evidence of ongoing alcohol or drug abuse within the last 6 months before randomization 30. Plans for administration of live vaccines during the study period or 6 weeks prior to randomization

Supplementary Figure 1: Hypothesis testing strategy



Testing strategy to control type I error

The following hypotheses were included in the testing strategy, and type-I-errors were set such that a family-wise type-I-error of 5% was kept:

Primary objectives:

H_1: secukinumab 150 mg regimen is not different to placebo regimen with respect to signs and symptoms (ASAS20 response) at Week 16

Secondary objectives:

H_2: secukinumab 150 mg regimen is not different to placebo regimen with respect to signs and symptoms (ASAS40 response) at Week 16

H_3: secukinumab 150 mg regimen is not different to placebo regimen with respect to change from baseline in hsCRP at Week 16

H_4: secukinumab 150 mg regimen is not different to placebo regimen with respect to ASAS 5/6 response at Week 16

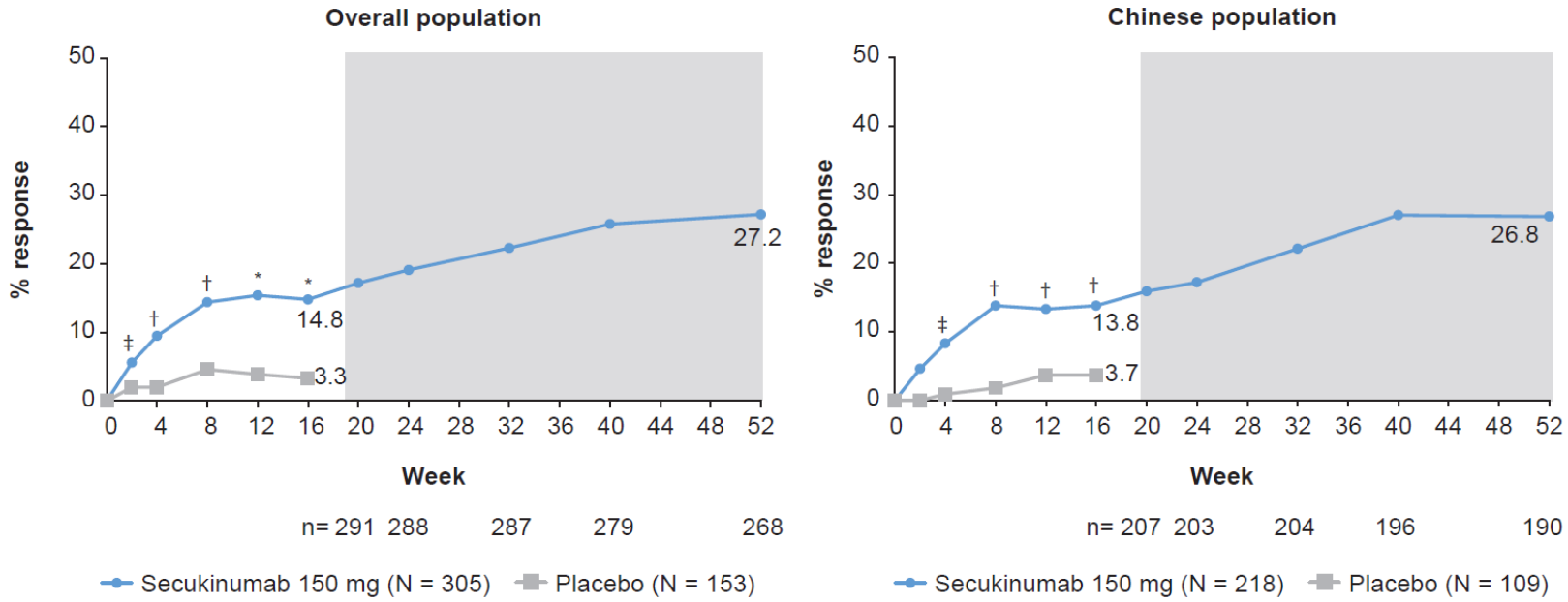
H_5: secukinumab 150 mg regimen is not different to placebo regimen with respect to change from baseline in total BASDAI at Week 16

H_6: secukinumab 150 mg regimen is not different to placebo regimen with respect to change from baseline in SF-36 PCS at Week 16

H_7: secukinumab 150 mg regimen is not different to placebo regimen with respect to change from baseline in ASQoL at Week 16

H_8: secukinumab 150 mg regimen is not different to placebo regimen with respect to ASAS partial remission criteria at Week 16

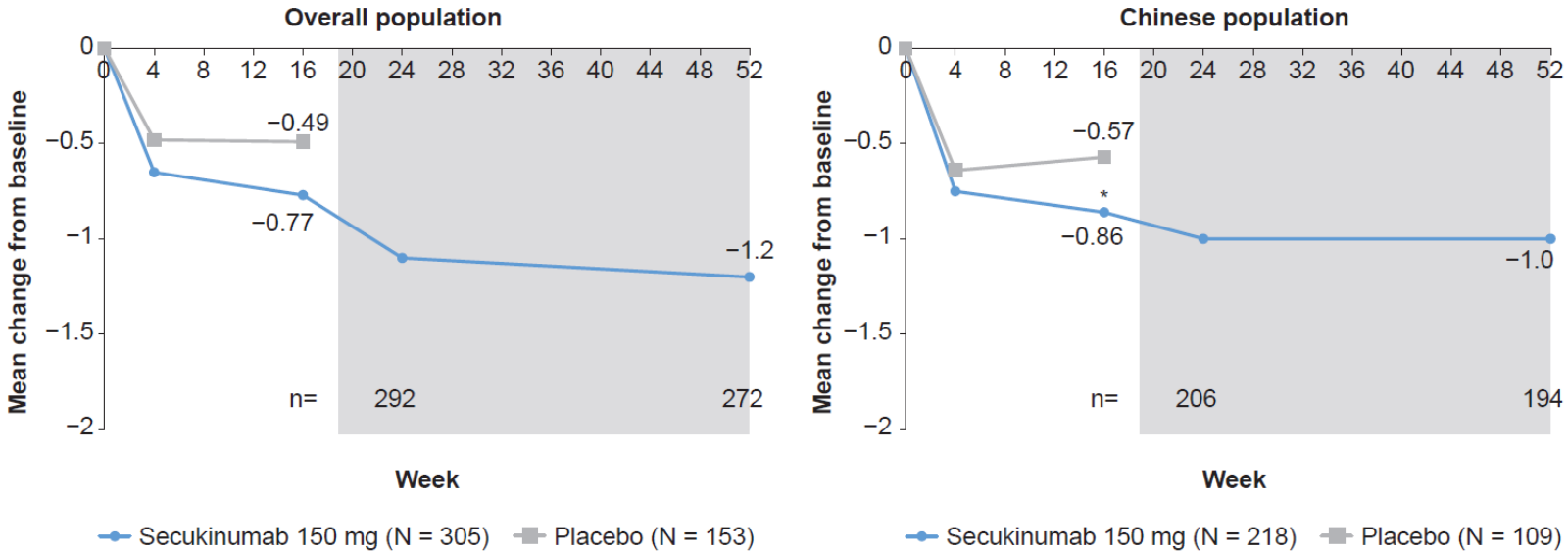
Supplementary Figure 2: ASDAS-CRP inactive disease response through Week 52



*$P < 0.001$; †$P < 0.01$; ‡$P < 0.05$ versus placebo. Missing values were imputed as non-response (NRI) through Week 16 and observed data from Week 20 to 52 (gray area).

ASDAS: Ankylosing Spondylitis Disease Activity Score; CRP: C-reactive protein; N: Total number of randomized patients; n: Number of evaluable patients; NRI: Non-responders imputation.

Supplementary Figure 3: MASES score through Week 52



*$P < 0.05$ versus placebo. MMRM data through Week 16 and observed data from Week 20 to 52 (gray area).

MASES, Maastricht Ankylosing Spondylitis Enthesitis Score; MMRM, mixed-effects repeated measures model; N, total number of randomized patients; n, number of evaluable patients

Supplementary Table 3: Summary of results in efficacy endpoints at Week 52 (observed data)

Items	Overall population		Chinese population	
	Secukinumab 150 mg (N = 305)	**Placebo-secukinumab 150 mg (N = 149)**	**Secukinumab 150 mg (N = 218)**	**Placebo-secukinumab 150 mg (N = 106)**
ASAS20[*]	206/267 (77.2)	86/124 (69.4)	148/190 (77.9)	64/94 (68.1)
ASAS40[*]	168/267 (62.9)	67/124 (54.0)	118/190 (62.1)	49/94 (52.1)
hsCRP[†]	–12.98 (25.02)	–14.72 (22.61)	–15.79 (26.64)	–15.30 (22.93)
	(*n* = 269)	(*n* = 125)	(*n* = 190)	(*n* = 94)
ASAS5/6[*]	174/268 (64.9)	69/136 (50.7)	124/190 (65.3)	54/ 94 (57.4)
BASDAI[†]	–3.66 (2.31)	–3.19 (2.16)	–3.69 (2.28)	–3.11 (2.17)
	(*n* = 268)	(*n* = 125)	(*n* = 190)	(*n* = 94)
SF-36 PCS[†]	9.54 (7.71)	9.42 (6.83)	9.69 (7.68)	9.61 (6.63)
	(*n* = 271)	(*n* = 126)	(*n* = 194)	(*n* = 95)
ASQoL[†]	–6.0 (4.97)	–5.5 (4.94)	–6.2 (5.04)	–5.5 (5.15)
	(*n* = 270)	(*n* = 126)	(*n* = 193)	(*n* = 95)
ASAS PR[*]	83/267 (31.1)	27/124 (21.8)	61/190 (32.1)	20/ 94 (21.3)

[*] *n*/M (%) responders; [†] Mean change (SD). ASAS: Assessment of SpondyloArthritis international Society; ASQoL: ankylosing spondylitis quality of life; BASDAI: Bath Ankylosing Spondylitis Disease Activity Index; hsCRP: high sensitivity C-reactive protein; M: number of evaluable patients for binary variables; N: total number of randomized patients; n: number of responders for binary variables and evaluable patients for continuous variables; PR: partial remission; SF 36 PCS: short form 36 physical component summary.

Supplementary Table 4: Summary of results by baseline TNFi therapy status at Week 16

	TNFi-naïve				TNFi-IR			
	Overall population		Chinese population		Overall population		Chinese population	
	Secukinumab 150 mg (N = 240)	Placebo (N = 122)	Secukinumab 150 mg (N = 164)	Placebo (N = 86)	Secukinumab 150 mg (N = 65)	Placebo (N = 31)	Secukinumab 150 mg (N = 54)	Placebo (N = 23)
ASAS20[‖]	58.3[†]	36.9	54.3[§]	37.2	58.5	35.5	61.1	43.5
ASAS40[‖]	42.5[*]	18.0	37.8[†]	16.3	49.2[‡]	12.9	53.7[‡]	17.4
hsCRP[¶]	0.39 (1.06)[*]	1.01 (1.08)	0.34 (1.07)[*]	0.95 (1.1)	0.41 (1.15)[*]	1.25 (1.20)	0.32 (1.14)[*]	1.09 (1.22)
ASAS5/6[‖]	46.3[*]	19.7	43.3[†]	18.6	50.8[†]	9.7	53.7[‡]	13.0
BASDAI[**]	–2.69 (0.15)[*]	–1.47 (0.21)	–2.45 (0.16)[*]	–1.30 (0.23)	–3.26 (0.30)	–1.73 (0.41)[‡]	–3.16 (0.30)[‡]	-1.67 (0.46)
SF-36 PCS[**]	7.36 (0.43)[†]	4.90 (0.60)	6.91 (0.46)[†]	4.18 (0.64)	7.29 (0.86)[‡]	3.25 (1.11)	7.97 (0.74)[‡]	3.75 (1.15)
ASQoL[3]	–4.67 (0.31)[‡]	–3.07 (0.43)	–4.19 (0.36)[‡]	–2.55 (0.50)	–5.19 (0.62)[‡]	–2.34 (0.80)	–5.47 (0.60)	–2.34 (0.92)[‡]
ASAS PR[‖]	15.0[§]	6.5	11.6	7.0	23.1	6.5	25.9	4.3

[*]$P < 0.0001$; [†]$P < 0.001$; [‡]$P < 0.01$; [§]$P < 0.05$ versus placebo. Missing values were imputed as non-response (NRI) for binary and MMRM for continuous variables. [‖]% responders; [¶]Exponentially transformed LSM (SE), the geometric mean ratio of post-baseline/baseline, a value <1 indicates a reduced CRP;

[**]LS mean change (SE) from baseline; ASAS: Assessment of SpondyloArthritis international Society; ASQoL: ankylosing spondylitis quality of life; BASDAI: Bath Ankylosing Spondylitis Disease Activity Index; hsCRP: high sensitivity C-reactive protein; IR: inadequate response; LS: least squares; LSM: least squares mean; N: total number of randomized patients; NRI: non-responders imputation; PR: partial remission; SE: standard error; SF 36 PCS: short form 36 physical component summary; TNF: tumor necrosis factor

Supplementary Table 5: Summary of results by baseline TNFi therapy status at Week 52 (observed data)

Items	TNFi-naïve				TNFi-IR			
	Overall population		Chinese population		Overall population		Chinese population	
	Secukinumab 150 mg (N = 239)	Placebo-secukinumab 150 mg (N = 119)	Secukinumab 150 mg (N = 163)	Placebo-secukinumab 150 mg (N = 84)	Secukinumab 150 mg (N = 66)	Placebo-secukinumab 150 mg (N = 30)	Secukinumab 150 mg (N = 55)	Placebo-secukinumab 150 mg (N = 22)
ASAS20[*]	160/209	71/100	109/141	53/75	46/58	15/24	39/49	11/19
	(76.6)	(71.0)	(77.3)	(70.7)	(79.3)	(62.5)	(79.6)	(57.9)
ASAS40[*]	131/209	56/100	87/141	41/75	37/58	11/24	31/49	8/19
	(62.7)	(56.0)	(61.7)	(54.7)	(63.8)	(45.8)	(63.3)	(42.1)
hsCRP[†]	–11.08	–13.98	–13.14	–14.24	–19.88	–17.88	–23.42	–19.49
	(22.17)	(21.80)	(22.90)	(21.50)	(32.73)	(26.02)	(34.41)	(28.15)
	(*n* = 211)	(*n* = 101)	(*n* = 141)	(*n* = 75)	(*n* = 58)	(*n* = 24)	(*n* = 49)	(*n* = 19)
ASAS5/6[*]	137/210	60/101	92/141	45/75	37/58	11/24	32/49	9/19
	(65.2)	(59.4)	(65.2)	(60.0)	(63.8)	(45.8)	(65.3)	(47.4)

BASDAI[†]	–3.56 (2.30)	–3.30 (2.18)	–3.58 (2.29)	–3.26 (2.19)	–4.00 (2.34)	–2.76 (2.06)	–4.00 (2.25)	–2.54 (2.09)
	(n = 210)	(n = 101)	(n = 141)	(n = 75)	(n = 58)	(n = 24)	(n = 49)	(n = 19)
SF-36 PCS[†]	9.18 (7.66)	9.78 (7.01)	9.26 (7.49)	10.15 (6.70)	10.81 (7.85)	7.92 (5.87)	10.91 (8.13)	7.42 (6.03)
	(*n* = 212)	(*n* = 102)	(*n* = 143)	(*n* = 76)	(*n* = 59)	(*n* = 24)	(*n* = 51)	(*n* = 19)
ASQoL[†]	–5.9 (4.96)	–5.6 (5.15)	–6.0 (5.00)	–5.6 (5.34)	–6.4 (5.06)	–5.3 (3.99)	–6.7 (5.18)	–4.8 (4.34)
	(*n* = 212)	(*n* = 102)	(*n* = 143)	(*n* = 76)	(*n* = 58)	(*n* = 24)	(*n* = 50)	(*n* = 19)
ASAS PR[*]	61/209	25/100	40/141	19/75	22/58	2/24	21/49	1/19
	(29.2)	(25.0)	(28.4)	(25.3)	(37.9)	(8.3)	(42.9)	(5.3)

[*] *n*/M (%) responders; [†]Mean change (SD). ASAS: Assessment of SpondyloArthritis international Society; ASQoL: ankylosing spondylitis quality of life; BASDAI: Bath Ankylosing Spondylitis Disease Activity Index; hsCRP: high sensitivity C-reactive protein; M: number of evaluable patients for binary variables; M: number of evaluable patients for binary variables; N: total number of randomized patients; n: number of responders for binary variables and evaluable patients for continuous variables; TNF: tumor necrosis factor; PR: partial remission; SF 36 PCS: short form 36 physical component summary