Supplementary Materials

Supplementary Figure legends

Supplementary Figure 1. SCTA01 structure

The structure formula of SCTA01, a novel IgG1 antibody, is $C_{6458}H_{9988}N_{1732}O_{2026}S_{42}$, with a LALA Fc modification.

Supplementary Figure 2. Correlations of natural log (Ln)-transformed SCTA01 doses with pharmacokinetic parameters C_{max} (A) and $AUC_{0\text{-}t}$ (B) of SCTA01.

Supplementary Table 1. Number of treatment-related adverse events experienced in participants receiving SCTA01 or placebo within the 84 days

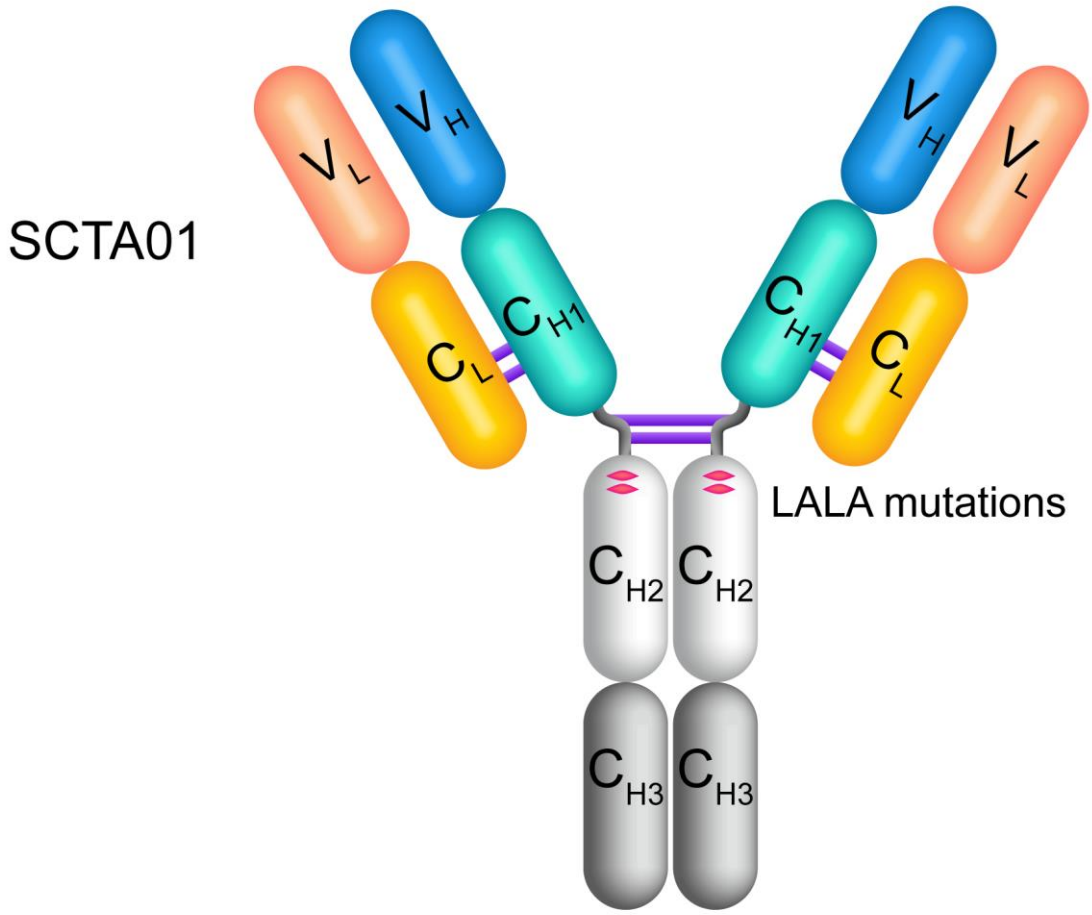
	SCTA01 dose				Total	
	5mg/kg (N = 3)	15mg/kg (N = 6)	30mg/kg (N = 8)	50mg/kg (N = 8)	**SCTA01** (N = 25)	**Placebo** (N = 8)
Any adverse event*	4	5	13	7	29	5
Any adverse event of ≥ grade 3	0	0	0	0	0	0
Laboratory investigations*	4	4	12	4	24	5
Increased conjugated bilirubin	1	0	3	1	5	0
Increased unconjugated bilirubin	1	0	2	1	4	1
Increased blood bilirubin	1	0	3	0	4	0
Increased alanine aminotransferase	0	1	0	0	1	0
Increased aspartate aminotransferase	0	0	0	0	0	1
Decreased neutrophil count	0	0	1	0	1	0
Decreased lymphocyte count	0	0	0	0	0	1
Increased fibrin D dimer	0	0	1	0	1	0
Increased platelet count	0	0	1	0	1	0
Decreased fibrinogen	0	0	1	0	1	0
Increased potassium	0	0	0	1	1	0
Increased white blood cell count in the urine	0	0	0	1	1	1
Protein in urine	1	1	0	0	2	0
Prolonged QT interval	0	2	0	0	2	0
Decreased diastolic blood pressure	0	0	0	0	0	1
Respiratory, thoracic and mediastinal disorders*	0	0	0	2	2	0
Epistaxis	0	0	0	2	2	0
Cardiac disorders	0	1	0	0	1	0
Sinus bradycardia	0	1	0	0	1	0
Skin and subcutaneous tissue disorders	0	0	0	1	1	0
Rash	0	0	0	1	1	0
Renal and urinary disorders	0	0	1	0	1	0
Hematuria	0	0	1	0	1	0

Data are presented as the number of TRAEs; *some AEs developed in the same participants.

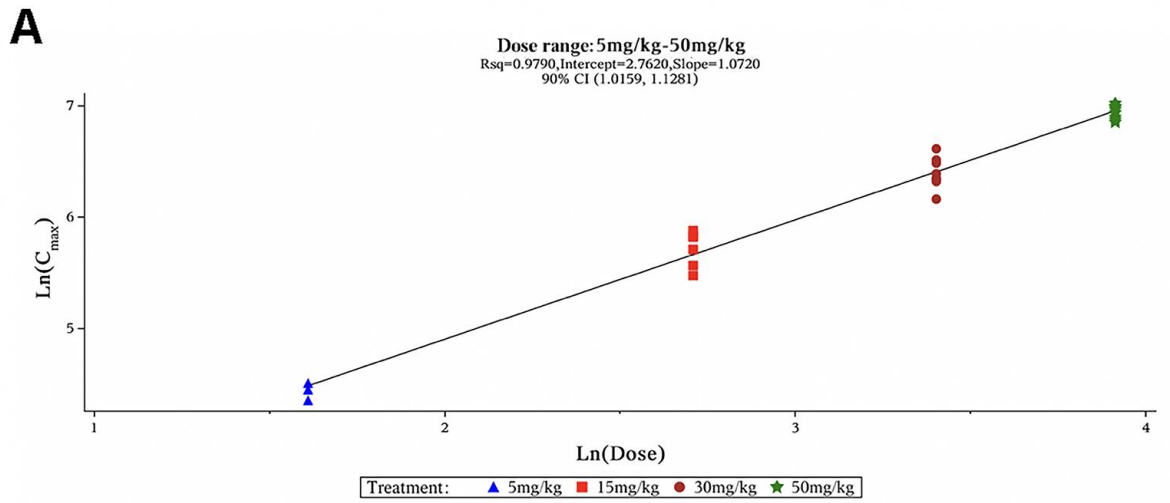
Supplementary Table 2. Dose proportional pharmacokinetic properties following intravenous infusion of SCTA01

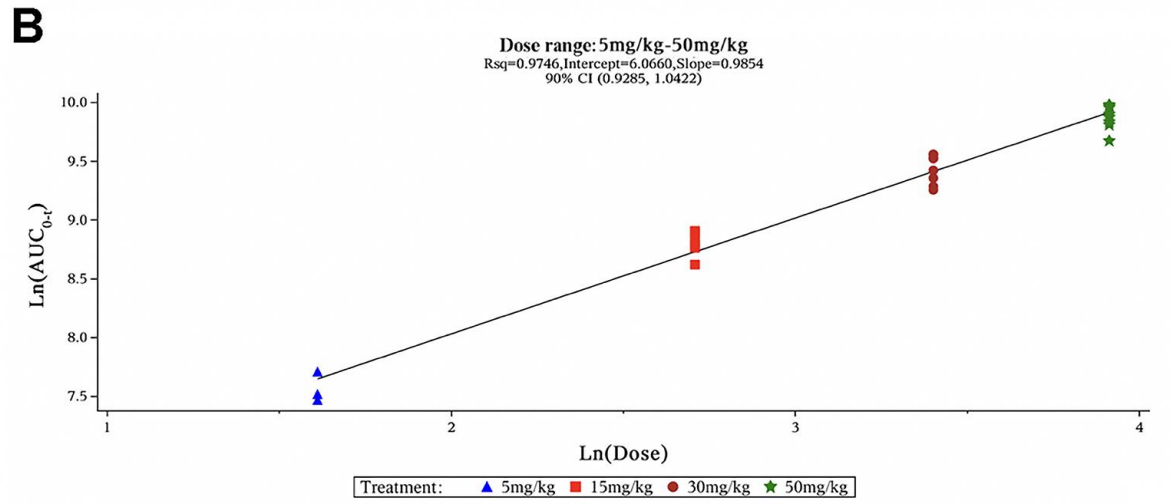
PK parameters	**Dose range (mg/kg)**	**n**	**Slope (β_1)**	**90% CI**
Ln (C_{max})	5-50	25	1.0720	(1.0159, 1.1281)
Ln (AUC_{0-t})	5-50	25	0.9854	(0.9285, 1.0422)
Ln ($AUC_{0-\infty}$)	5-50	25	0.9645	(0.8948, 1.0341)
Ln (AUC_{0-28d})	5-50	25	1.0205	(0.9746, 1.0664)

Ln, log-transformed; C_{max}, maximum concentration; AUC, area under the concentration-time curve; AUC_{0-t}, AUC from 0 to the time of last quantifiable concentration; $AUC_{0-\infty}$, AUC from 0 to infinity; AUC_{0-28d}: AUC from 0 to day 28



Supplementary Figure 1





Supplementary Figure 2