Supplemental Appendix

Table S1. Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
1. Patients of age between 20 through 80 years. 2. Patients had an onset of ischemic stroke within 48 to 168 hours before start of treatment. 3. Patients with ischemic stroke with speech deficit documented by NIHSS of 5 to 20, not change by ≥ 4 points from baseline. 4. Patients had ischemic stroke with large-artery atherosclerosis or cardioembolism. 5. Patients confirmed of hemispheric cortical infarct with brain MRI including imaging demonstrating an acute lesion < 100 mL. 6. Patients' mRS of 0 or 1, reported by subject or family, prior to the onset of symptoms of the current stroke. 7. Patients with body weight of 50 to 90 kgs. 8. Patient or legal guardian is willing to provide written ICF to participate in the study, and had discussion with the investigator or designee. 9. Women of child-bearing potential should have a negative urine pregnancy test prior to administration of IP.	1. Patients with occurrence of a hemorrhagic transformation of ischemic stroke as evidenced by CT. 2. Patients with a lacunar a lesion of ≤ 1.5 cm of longest diameter or a brainstem infarct on MRI. 3. Patients with reduced level of consciousness (score of 3 for item 1a of NIHSS) 4. Patients experienced seizures since the onset of ischemic stroke. 5. Patients with significant head trauma (GCS = 3~8) or prior stroke within previous 3 months (except TIA). 6. Patients had uncontrolled hyper-tension despite antihypertensive treatments. 7. Patients with blood glucose concentration < 50 mg/dL or > 400 mg/dL. 8. Patients with uncorrected coagulopathy. 9. Patients with history of any type of malignancy. 10. Patients with major surgery within 30 days. 11. Patients are pregnant (or plan to become pregnant within 3 months of IP) or lactating. 12. Patients have significant illness as judged by PI. 13. Patients have the following conditions in laboratory tests. 14. Patients are known to be HIV infection. 15. Patients not have CT or MRI test. 16. Patients unable to return in follow-up visits for clinical evaluation, laboratory studies, or imaging evaluation. 17. Patients participated in another clinical study of new investigational therapies. 18. Patients have the following medical history.

Table S2. Summary of AEs and TEAEs (by Event)

Characteristic (n)	Cohort 1	Cohort 2	Total
Number of AEs	23	17	40
Number of TEAEs	18	17	35
Number of SAEs	6	4	10
DLT (n)			
Yes	0	0	0
No	18	17	35
TEAE Relationship (n, %)			
Mild	3 (16.67%)	2 (11.76%)	5 (14.29%)
Moderate	9 (50.00%)	11 (64.71%)	20 (57.14%)
Severe	2 (11.11%)	3 (17.65%)	5 (14.29%)
Life-threatening	4 (22.22%)	1 (5.88%)	5 (14.29%)
TEAE Relationship (n, %)			
Unlikely	13 (72.22%)	0	13 (37.14%)
Unrelated (n, %)	5 (27.78%)	17 (100%)	22 (62.86%)
TEAE Action taken – IP (n, %)			
Negative	1	1	2
Not Applicable	2	2	4
TEAE Action taken – Other (n, %)			
None	4 (22.22%)	2 (11.76%)	6 (17.14%)
Non-study treatment given	14 (77.78%)	15 (88.24%)	29 (82.86%)
TEAE outcome (n, %)			
Resolved	8 (44.44%)	12 (70.59%)	20 (57.14%)
Ongoing	10 (55.56%)	5 (29.14%)	15 (42.86%)

AE = adverse event; TEAE = treatment-emergent adverse event; SAE = serious adverse event; DLT = dose-limiting toxicity; IP = investigational product.

Table S3. Statistical Analysis of mRS Scores

Visit		Screening	5	6	7	8	9	10	11
Day		-7 ~ -1	14	30	90	180	270	360	450
Cohort 1	Patient 1	0	5	4	4	4	4	3	3
	Patient 2	4	4	4	Withdrawn				
	Patient 5	4	3	2	1	0	0	0	0
Cohort 2	Patient 6	4	3	2	1	0	1	1	0
	Patient 7	4	5	4	4	4	4	4	4
	Patient 8	5	4	3	1	1	1	1	1
N		6	6	6	5	5	5	5	5
Mean		3.5	4	3.2	2.2	1.8	2	1.8	1.6

Table S4. Statistical Analysis of BI Scores

Visit		Screening	5	6	7	8	9	10	11
Day		-7 ~ -1	14	30	90	180	270	360	450
Cohort 1	Patient 1	10	20	20	20	20	20	25	30
	Patient 2	0	20	20	0	Withdrawn			
	Patient 5	35	40	75	85	95	95	100	100
Cohort 2	Patient 6	35	60	75	85	95	85	85	90
	Patient 7	0	0	10	-	20	20	20	20
	Patient 8	0	35	50	85	95	95	95	95
N		6	6	6	5	5	5	5	5
Mean		13.33	29.16	41.67	55.0	65.0	63.0	65.0	67.0
Mean change from baseline		-	15.83	28.33	41.67	51.67	49.67	51.67	53.67
P value		-	0.063	0.031*	0.125	0.063	0.063	0.063	0.063

P-value was calculated using by Wilcoxon signed-rank test. *: statistical significance

Table S5. Statistical Analysis of NIHSS Scores

Visit	Day	Cohort 1			Cohort 2			Mean	Mean Change from Baseline	P value
		Patient 1	Patient 2	Patient 5	Patient 6	Patient 7	Patient 8			
Screening	**-7 ~ -1**	10	9	9	5	12	17	10.33	-	-
1	**0**	10	11	8	5	14	17	10.83	0.5	0.5
2	**1**	11	11	6	2	14	17	10.17	-0.2	0.75
3	**3**	9	11	5	2	14	15	9.33	-1	0.438
4	**7**	9	12	4	2	14	15	9.33	-1	0.563
5	**14**	9	11	3	2	14	12	8.5	-1.8	0.313
6	**30**	9	9	1	0	13	10	7.0	-3.3	0.188
7	**90**	9	17	0	0	-	5	6.2	-3.8	0.313
8	**180**	9	Withdrawn	0	0	9	3	4.2	-6.4	0.063
9	**270**	9		0	0	9	2	4.0	-6.6	0.063
10	**360**	9		0	0	9	2	4.0	-6.6	0.063
11	**450**	8		0	0	9	2	3.8	-6.8	0.063

P-value was calculated using by Wilcoxon signed-rank test.

Table S6. Statistical Analysis of MRI assessment

	Visit	Screening	6	7	11
	Day	-7 ~ -1	30	90	450
Cohort 1	Patient 1	68	11	0	0
	Patient 2	69	0	Withdrawn	
	Patient 5	0	0	0	0
	Patient 6	8	0	0	0
Cohort 2	Patient 7	14	0		
	Patient 8	55	0	0	0
N		6	6	4	4
Mean		35.67	1.83	0	0
Mean change from baseline		-	-33.84	-35.67	-35.67
P value		-	0.063	0.25	0.25

P-value was calculated using by Wilcoxon signed-rank test.