

# Supplementary Materials: Ganglioside GD3 Regulates Inflammation and Epithelial-To-Mesenchymal Transition in Human Nasal Epithelial Cells

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**Supplementary Table S1.** List of antibodies used in this study

Antibody	Company	Cat. No.	Application & Dilution
E-CADHERIN	Cell signaling	#3195	WB; 1:1,000 / IF; 1:200
N-CADHERIN	ABclonal	A19083	WB; 1:500 / IF; 1:100
SLUG	Cell signaling	#9585	WB; 1,000 / IF; 1:400
NK-κB p65	Cell signaling	#3039	WB; 1,000
β-ACTIN	Sigma-Aldrich	A5441	WB; 1:5,000
Histone H3	Cell signaling	#4499	WB; 1:2,000
Donkey anti-mouse IgG, Alexa 488	Thermo Fisher Scientific	A-21202	IF; 1:400
Donkey anti-rabbit IgG, Alexa 555	Thermo Fisher Scientific	A-31572	IF; 1:400
Goat anti-Mouse-HRP	Thermo Fisher Scientific	G-21040	WB; 1:10,000

Goat anti-Rabbit-HRP	Thermo Fisher Scientific	G-21324	WB; 1:10,000
DAPI	Sigma-Aldrich	D9542	IF; 30 nM

**Supplementary Table S2.** siRNA sequences for the knock-down of GD3 synthase (ST8Sia1)

Gene	Cat. No.	Sequence
<i>siST8SIA1 #1</i>	1021-1	CAC UUG GAC CAU GAC AGU A=tt(1-AS) UAC UGU CAU GGU CCA AGU G=tt(1-AA)
<i>siST8SIA1 #2</i>	1021-2	ACA GCU UUG AUA CAC AGU A=tt(2-AS) UAC UGU GUA UCAAAG CUG U=tt(2-AA)
<i>siST8SIA1 #3</i>	1021-3	CUG UAC UGG CGU GGA AGU U=tt(3-AS) AAC UUC CAC GCC AGU ACA G=tt(3-AA)

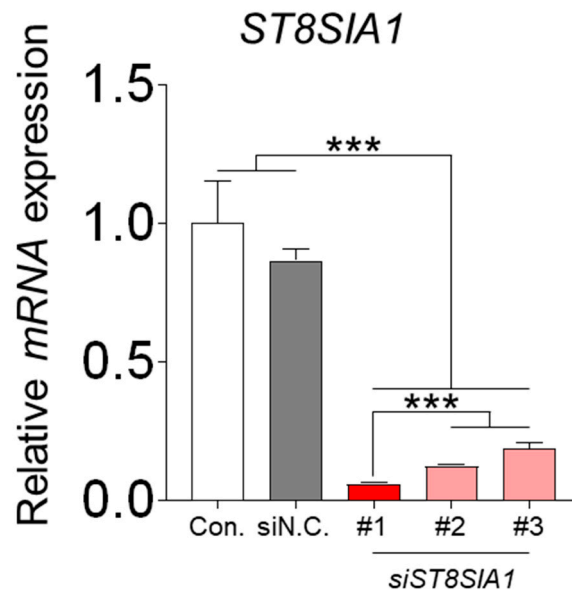
**Supplementary Table S3.** Primer sequences used for qPCR analysis

Gene	Sequence (5'-3')	Product size
<i>IL-6</i>	F: 5'- ACTCACCTCTTCAGAACGAATTG-3'	149 bp
	R: 5'- CCATCTTTGGAAGGTTTCAGGTTG-3'	
<i>IL-8</i>	F: 5'- ACTGAGAGTGATTGAGAGTGGAC-3'	112 bp
	R: 5'- AACCCTCTGCACCCAGTTTTTC-3'	
<i>E-CAD</i>	F: 5'- ATTTTCCCTCGACACCCGAT-3'	109 bp
	R: 5'- TCCCAGGCGTAGACCAAGA-3'	
<i>N-CAD</i>	F: 5'- AGCCAACCTTAACTGAGGAGT-3'	136 bp
	R: 5'- GGCAAGTTGATTGGAGGGATG-3'	
<i>SLUG</i>	F: 5'- CTAAGTGGACACACATACAGTG-3'	87 bp
	R: 5'- CTGAGGATCTCTGGTTGTGGT-3'	
<i>MMP-9</i>	F: 5'- AGACCTGGGCAGATTCCAAAC-3'	94 bp
	R: 5'- AGGCAAGTCTTCCGAGTAGT-3'	
<i>ST8SIA1</i>	F: 5'- CATGCGATGCAATCTCCCTC-3'	84 bp
	R: 5'- CTGGGATTAGCTGTCACTAACTG-3'	
<i>CD73</i>	F: 5'- AAGGACTGATCGAGCCACTC-3'	161 bp

	R: 5'- GGAAGTGTATCCAACGATTCCCA-3'	
<i>CD90</i>	F: 5'- ATGAAGGTCCTCTACTTATCCGC-3'	
	R: 5'- GCACTGTGACGTTCTGGGA-3'	112 bp
<i>CD105</i>	F: 5'- GCATCCTTCGTGGAGCTACC-3'	
	R: 5'- GAGGAGTGGTCTGGATCGG-3'	103 bp
<i>β-ACTIN</i>	F: 5'- TCCTCTCCCAAGTCCACACAGG-3'	
	R: 5'- GGGCACGAAGGCTCATCATTC-3'	131 bp

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## Supplementary Figure Legends



**Figure S1. Knock-down efficiency of ST8Sia1 (GD3 synthase) expression in hNECs.**

hNECs were transfected with three different ST8Sia 1-targeting siRNAs (siST8Sia1 #1~#3). After 48 hours, siST8Sia1 #1 was found to significantly reduce the ST8Sia1 mRNA expression. mRNA expression levels were normalized to the housekeeping gene,  $\beta$ -Actin. The values shown are the mean  $\pm$  SD ( $n = 6$ ) and analyzed by Student's t-test. \*\*\* $P < 0.001$ .