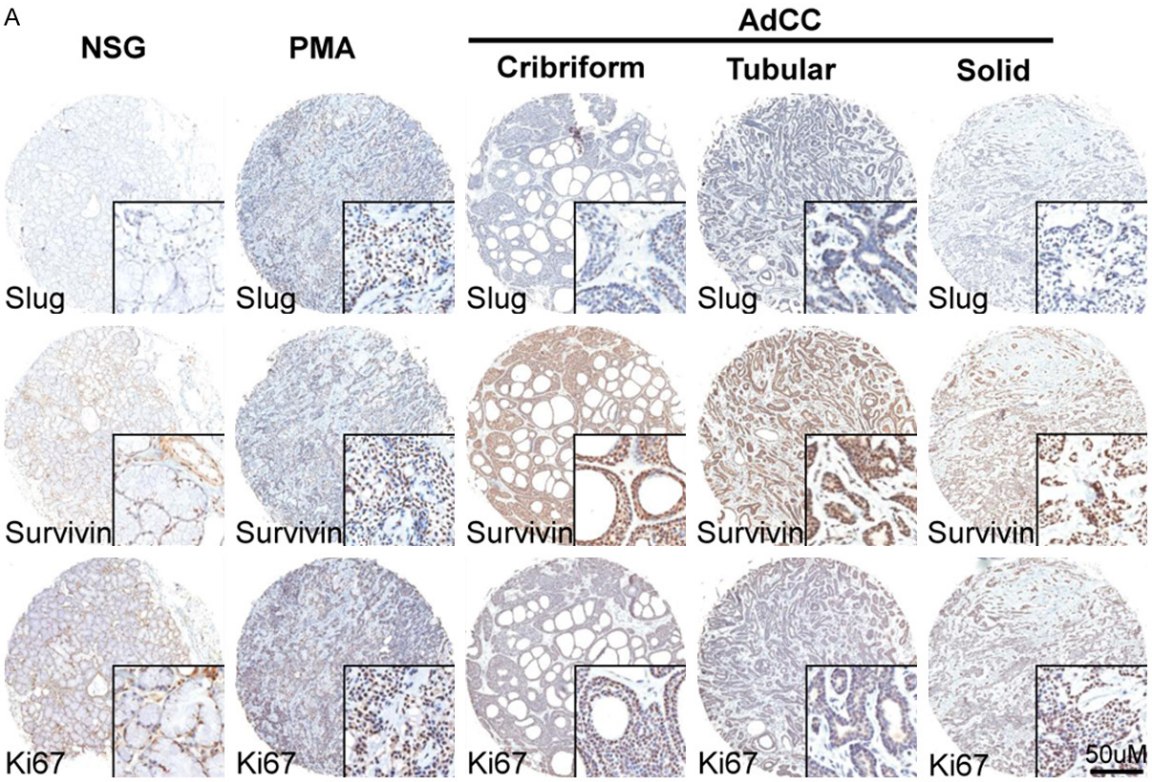
A



B

Marker	NSG vs PMA	NSG vs AdCC	PMA vs AdCC
Slug	<0.001	<0.001	<0.001
Survivin	>0.05	<0.001	<0.001
Ki67	>0.05	<0.01	>0.05

C

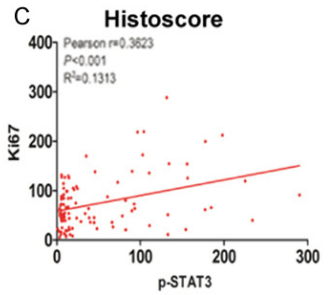


Figure S1. Analysis of tissue microarray cores for immunohistochemistry. A: Representative images from immunohistochemical staining of Slug (upper)and Ki67 (lower) nuclear expression, Survivin nuclear and cytoplasmic expression (middle) in human normal salivary gland (NSG), polymorphism adenoma (PMA) and cribriform, tubular or solid type adenoid cystic carcinoma (AdCC). Scale bar=50 μm. B: Quantification of Slug, Survivin and Ki67 expression levels in human NSG, PMA and AdCC tissue using AperioScanscope scanner and software. C: The expression of p-STAT3 had significant correlation with Ki67 ($p<0.001$, $r^2=0.1313$). Data were analyzed by GraphPad Prism 5 software. (Mean ± SEM; *, $p<0.05$; **, $p<0.01$; ***, $p<0.001$).

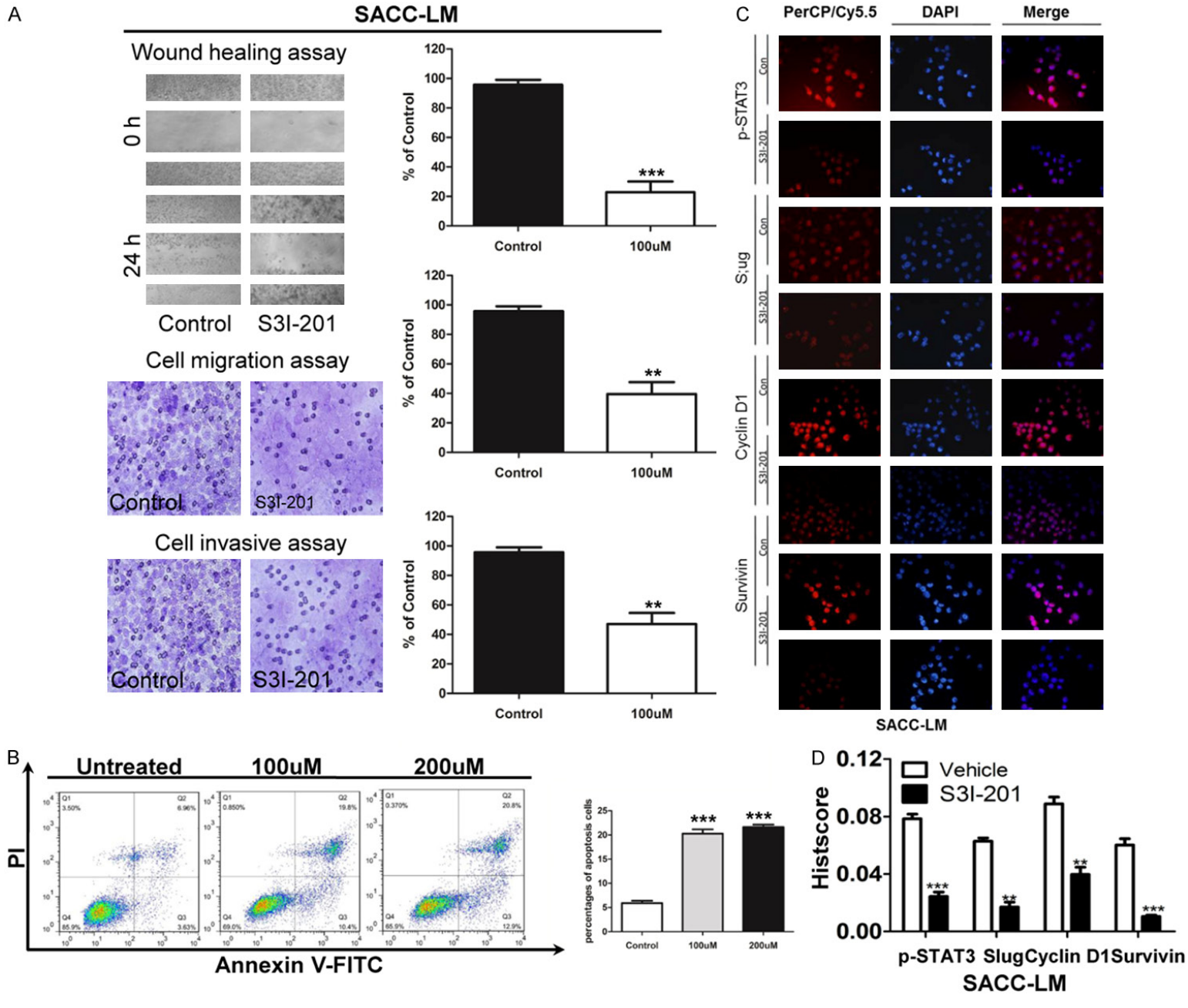

A
SACC-LM
Wound healing assay
0 h
24 h
Control
S3I-201
Cell migration assay
Control
S3I-201
Cell invasive assay
Control
S3I-201
% of Control
Control
100uM
***
**
**
C
PerCP/Cy5.5
DAPI
Merge
p-STAT3
S;ug
Cyclin D1
Survivin
Con
S3I-201
SACC-LM
B
Untreated
100uM
200uM
PI
Annexin V-FITC
percentages of apoptosis cells
Control
100uM
200uM
D
Vehicle
S3I-201
Histscore
p-STAT3
Slug
Cyclin D1
Survivin
SACC-LM

Figure S2. STAT3 signaling inhibition decreased migration and invasion, and increased the apoptosis in AdCC cell line SACC-LM. A: Scratch assay shows treatment with S3I-201 24 hours significantly decrease the mobility of SACC-LM cell line; and transwell assay shows the migration and invasion ability of SACC-83 were impaired when treated with S3I-201 compared with control group (Quantification of cell numbers with ImageJ "cell counter" module, Mean ± SD; ***P<0.001, student t-test with GraphPad Prism5.0). B: Annexin V/PI staining showed S3I-201 treatment (100 uM and 200 uM) notably increased the apoptosis cells compared with the control group SACC-LM. C: Immunofluorescence shows treatment with S3I-201 24 hours decrease the expression of p-STAT3, Cyclin D1, Slug and Survivin in SACC-LM cell line. D: Quantification of immunofluorescence for SACC-LM with Image J, IOD for mean integrated optical density and calculated with total optical density divided by the area.