Appendix 1

Table S1. Laboratory reagents

Reagen	Source	Catalog No.
Red Blood Cell (RBC) Lysis Buffer	Servicebio	G2015
PBS	Servicebio	G4202
Nuclease-Free Water	Servicebio	G4700
Absolute Ethanol	SCRC	10009218
Isopropanol	SCRC	80109218
Methanol	SCRC	40064260
Trizol Reagent	Invitrogen	15596-026
Chloroform substitute	Servicebio	G3014-02
HP All-in-one qRT Master Mix II	YUNBIO	RT203
2×Universal SYBR qPCR Master Mix	YUNBIO	QP1015
RIPA Lysis Buffer	LABLEAD	R1091
12.5% Fast PAGE Gel Preparation Kit	EpiZyme	PG133
Enhanced Chemiluminescence (ECL) Kit	LABLEAD	E1050
Ice-Bath-Free Transfer Buffer (Powder)	Servicebio	JN-0036
5×Loading buffer	Servicebio	G2013
10×TBST Buffer	Servicebio	G0004
Marker	UE	P6110L
Antibody Dilution Buffer	EpiZyme	PS119S
HRP-conjugated Rabbit Anti-Goat IgG(H+L)	proteintech	SA00001-4
CD63 Recombinant monoclonal antibody	proteintech	84507-4-RR
TSG101 Antibody	Selleck Chemicals	F1543
Nonfat Dry Milk	LABLEAD	N7861
qEVoriginal High-Purity Exosome Isolation Column (70 nm)	IZON	ICO-70
SWE Fast High-Resolution Electrophoresis Buffer (Powder)	Servicebio	G2081-15

Appendix 2

Product Manual for Prestained Dual Color Protein Marker (10-180 kDa) - UELandy

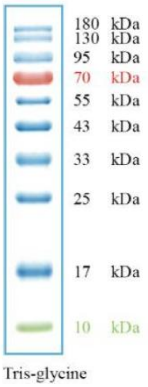


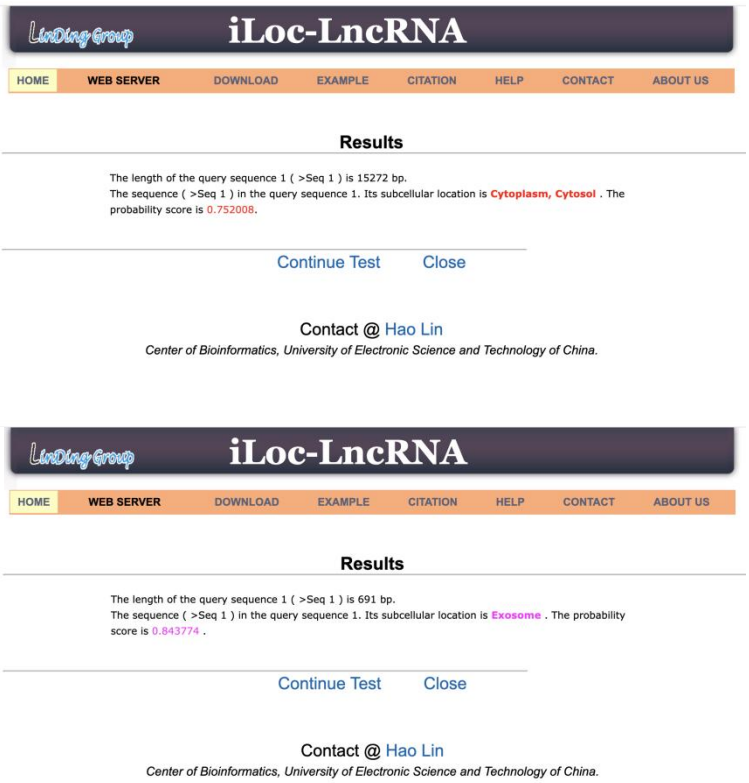
Figure S1. Electrophoresis and transfer results of the pre-stained protein marker (10-180 kDa, Tri-color) on a 15% Tris-glycine gel.

The marker was resolved on a 15% SDS-PAGE gel under Tris-glycine buffer conditions. The reference bands are color-coded for easy identification: the 70 kDa band is orange, and the 10 kDa band is green. The full range covers molecular weights from 10 to 180 kDa. This specific formulation (Catalog No.: P6110L, UELandy) is designed to facilitate real-time monitoring of protein separation during electrophoresis and subsequent transfer efficiency onto membranes.

Appendix 3

Subcellular Localization

A



B

Figure S2. Subcellular localization prediction of lncRNAs ITGA9-AS1（A） and WNT5A-AS1（B）.

Predictions were generated using the iLoc-LncRNA web server. Panel (A) indicates that ITGA9-AS1 is predominantly localized to the cytoplasm (prediction score = 0.752), while panel (B) predicts a high exosomal enrichment for WNT5A-AS1 (prediction score = 0.844). These computational results underpin the hypothesized functional roles for ITGA9-AS1 in intracellular ceRNA networks and for WNT5A-AS1 in exosome-mediated intercellular communication.

Original Western blot data

TableS2. Predicted molecular mass of exosomal marker proteins

Protein Name	Predicted molecular mass
CD63	26kDa
Tsg101	44 kDa

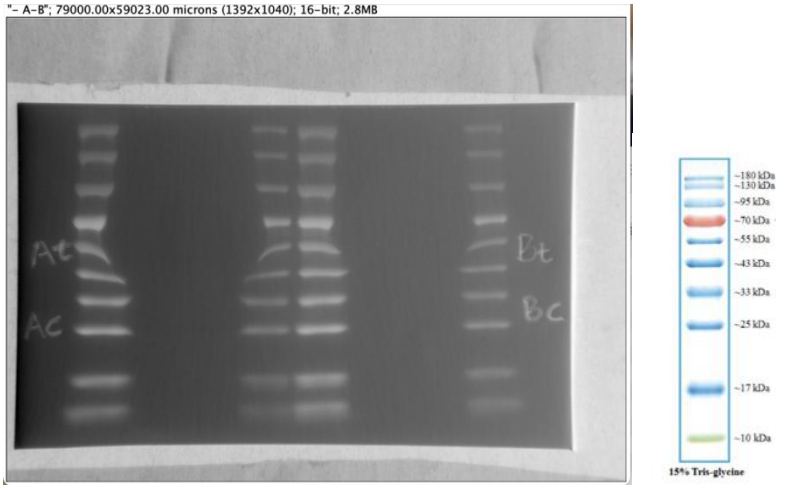
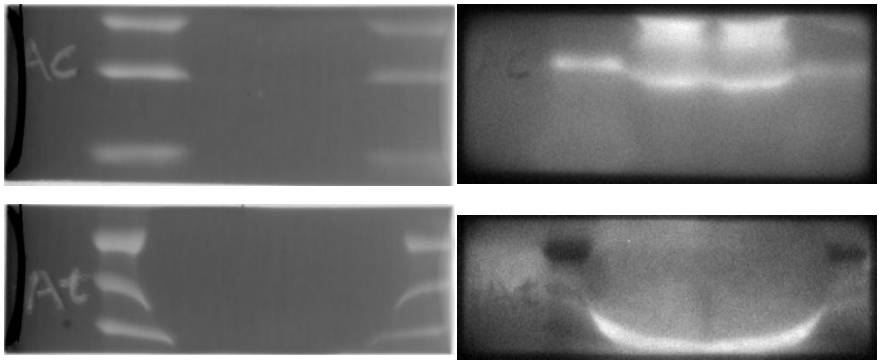


Figure S3. Full-length gel image of group A and B samples (each with one HC and one SZ).

At/Bt : CD63 (~26 kDa) bands in group A and B samples, respectively.

Ac/Bc : Tsg101 (~44 kDa) bands in group A and B samples, respectively.

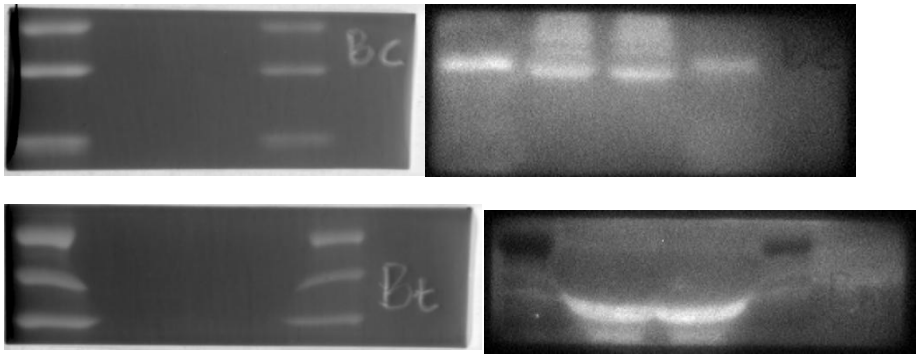
The right panel shows marker molecular weights for target protein reference.



(A)

(B)

Figure S4. Western Blot detection of CD63 (A) and Tsg101 (B) in group A samples (each containing one HC and one SZ). Specific bands were observed at ~26 kDa (CD63)and 44 kDa (Tsg101), consistent with their predicted molecular masses.



(A)

(B)

Figure S5. Western Blot detection of CD63 (A) and Tsg101 (B) in group B samples. Band positions are consistent with figure S4.

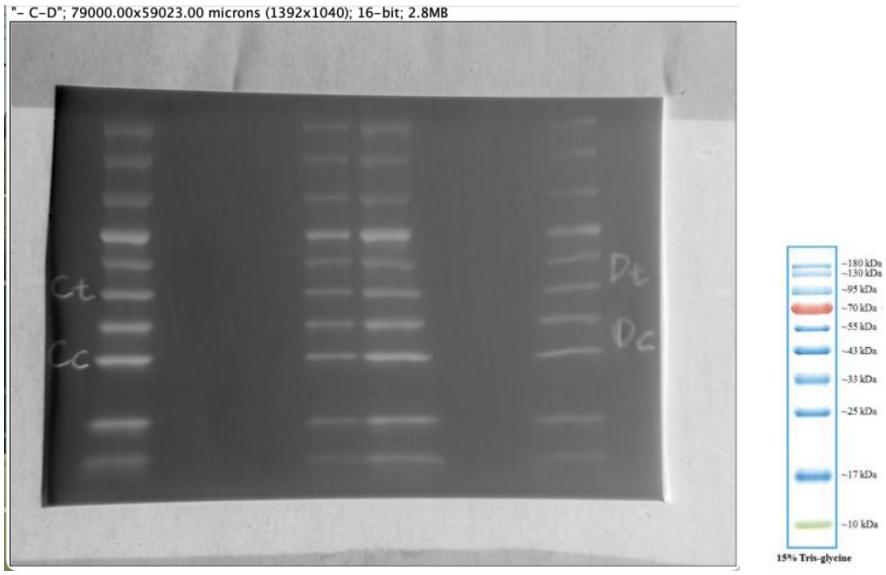
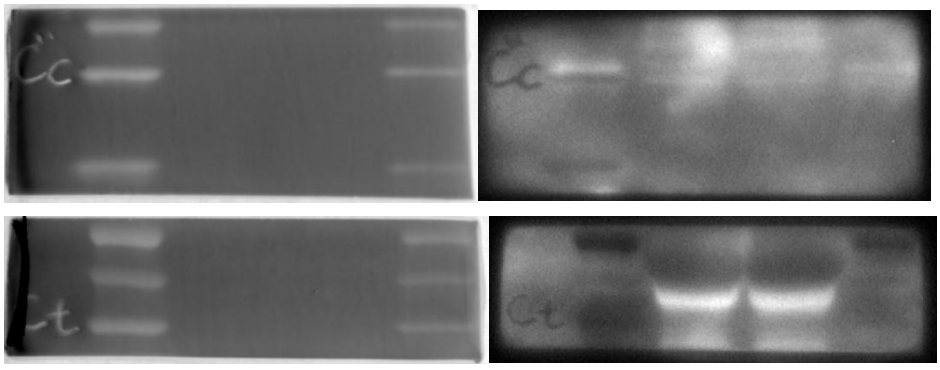


Figure S6. Full-length gel image of group C samples (each with one HC and one SZ), showing the positions of CD63 (~26kDa) and Tsg101 (~44kDa) bands with the pre-stained protein marker on the right.

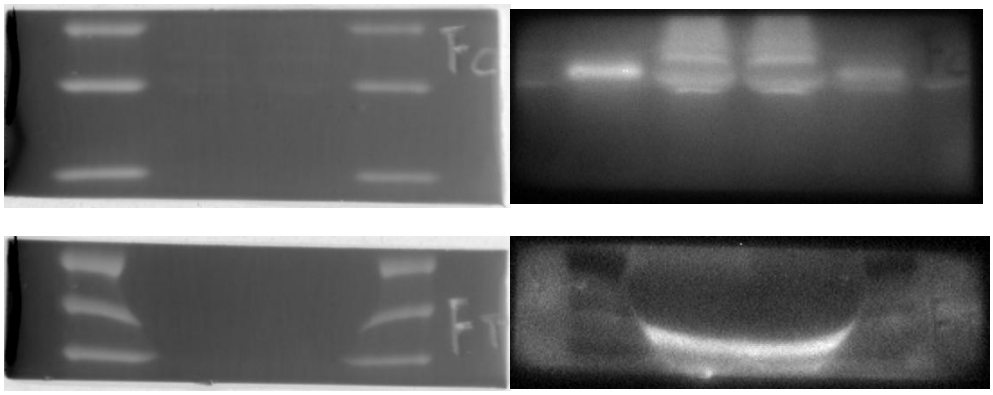


(A)

(B)

Figure S7. Western Blot detection of CD63 (A) and Tsg101 (B) in group C samples. Band positions are consistent with figure S4.

The anti-CD63 result for Sample C was indistinct. Therefore, Sample F was analyzed instead, as shown below.



(A)

(B)

Figure S8. Western Blot detection of CD63 (A) and Tsg101 (B) in gtoup F samples. Band positions are consistent with figure S4.