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**Supplementary Information**

Article

# **Interleukin-4 Receptor Targeting Peptide Decorated Extracellular Vesicles as A Platform For In Vivo Drug Delivery to Thyroid Cancer**

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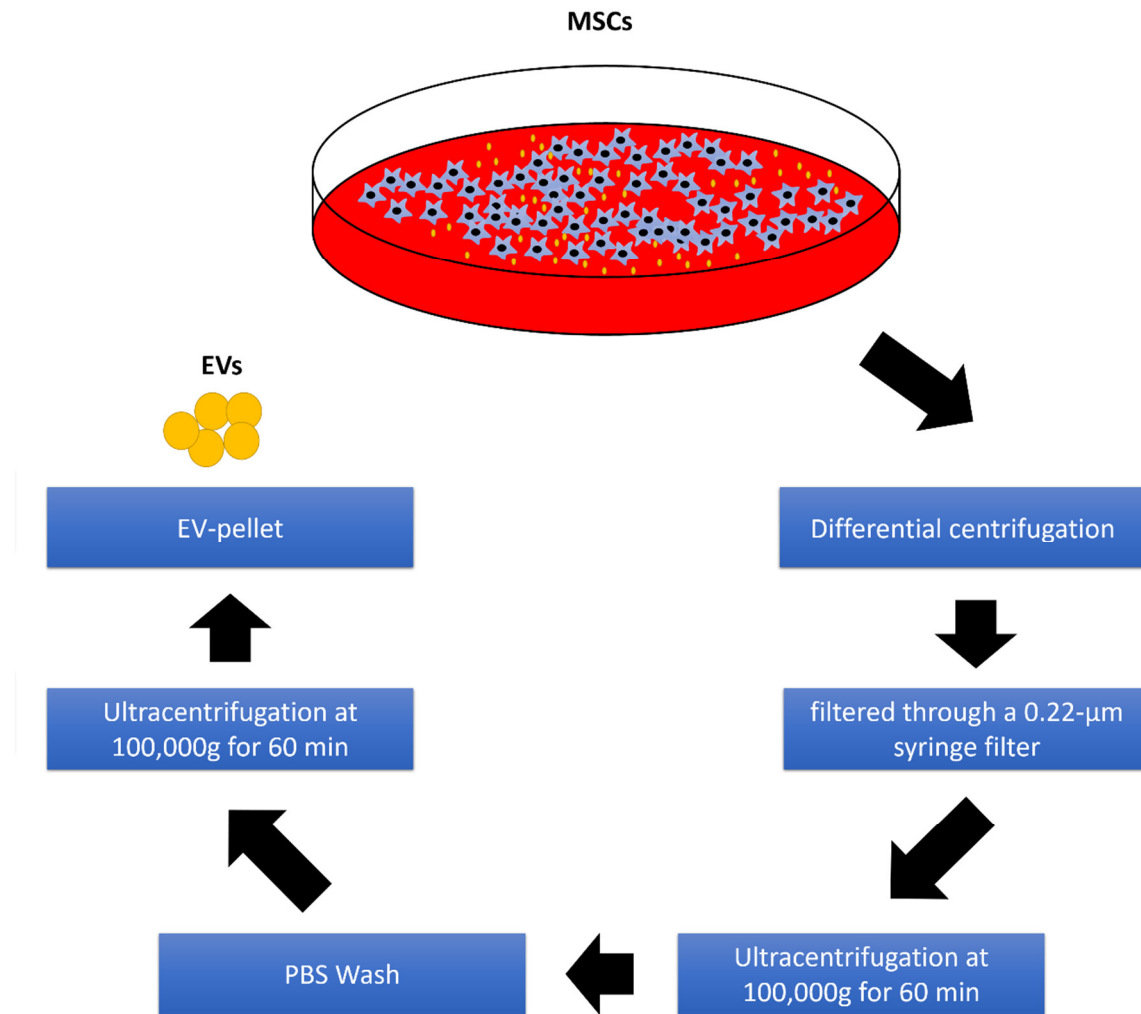
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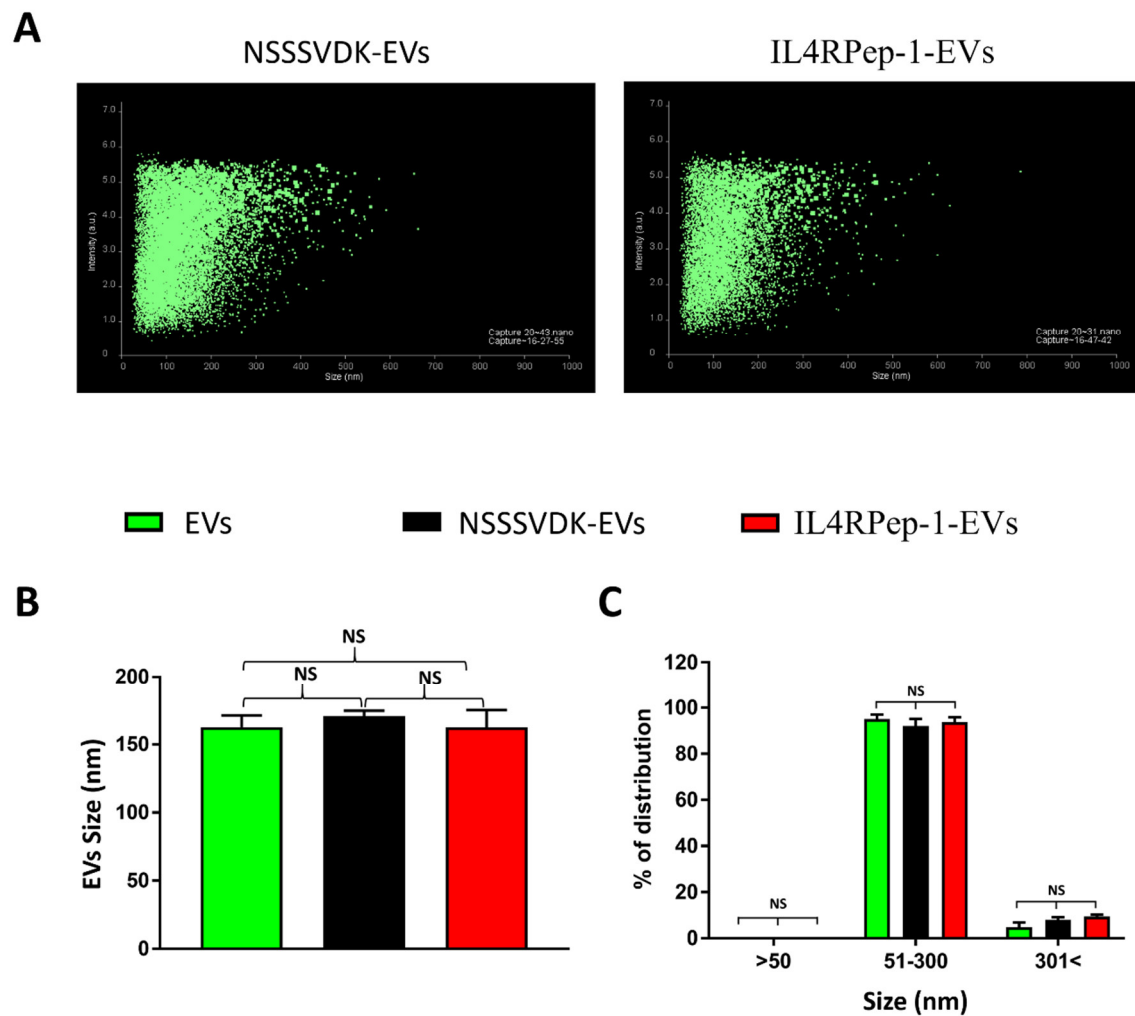
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**Table-S1.** List of antibodies.

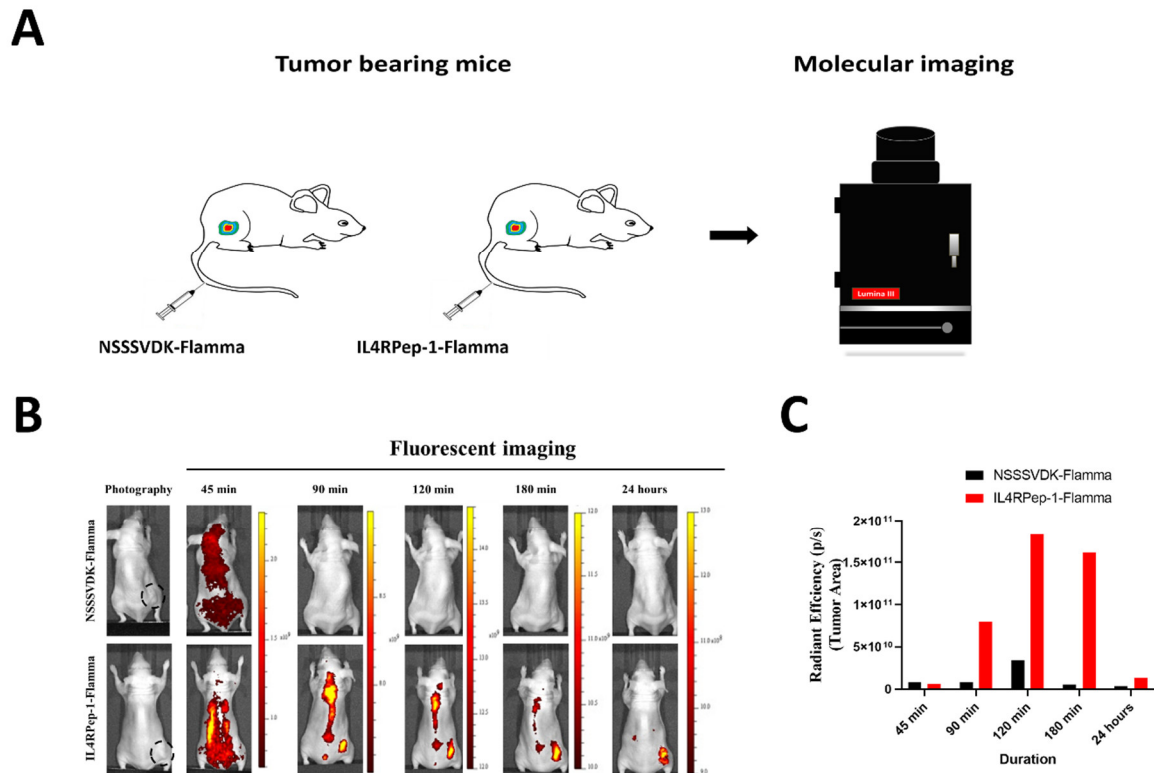
<b>S. no</b>	<b>Antibody</b>	<b>Company</b>	<b>WB</b>	<b>IF</b>
1	CD63	Abcam	1:4000	-
2	ALIX	Abcam	1:4000	-
3	GM130	Abcam	1:4000	-
4	Cytochrome-C	Abcam	1:4000	-
6	IL4R	Santacruz	1:3000	1:200
7	Anti-rabbit secondary	Cell Signaling	1:10000	-
8	Anti-mouse secondary	Cell Signaling	1:10000	-
9	FITC conjugated Anti-rabbit secondary	Cell Signaling	-	1:400
10	Alexa Fluor-647-anti-mouse secondary	Cell Signaling	-	1:400



**Supplementary Figure S1.** Schematic representation of isolation of extracellular vesicles (EVs) from mesenchymal stem cells (MSCs).



**Supplementary Figure S2. Peptide labeling retains the size and distribution of extracellular vesicles (EVs).** (A) Scatter plot of NSSSVDK-EV and IL4RPep-1-EV analyzed by nanoparticle tracking analysis (NTA). (B) Size of EVs, NSSSVDK-EV and IL4RPep-1-EV determined by NTA. (C) Percentage distribution of EVs represented on bar graph (Approximately 95 % EVs ranged in size between 50-300 nm). Data are represented as mean  $\pm$  standard deviation (SD). Statistical difference between groups was analyzed using Student's t-test.



**Supplementary Figure S3. Intravenously (i.v.) injected IL4R Pep-1 targets Cal-62 tumor in mouse (n=1/group), monitored by fluorescent imaging. (A)** Schematic image of Cal-62 tumor bearing mouse i.v. injection with NSSSVDK-Flamma and IL4RPep-1-Flamma; mouse imaged with IVIS imaging system. **(B)** Florescent imaging at 45, 90, 120, 180 min and 24 h post-i.v. injection of NSSSVDK-Flamma or IL4RPep-1-Flamma in Cal-62 tumor bearing mouse. **(C)** Quantification of florescent signals at the tumor region.