Supplementary figure legends

Figure S1 :Characterization of the stable RBL line overexpressing the human HA- PLD2

Upper left panel. HPLC profiles of phospholipase D activity in RBLwt and RBLpld2 cell lines. Cell lysates were incubated for 2 hours with the fluorescent substrate. DG=diglycerides; Pet= phosphatidylethanol, monitoring PLD activity; PC= phosphatidylcholine (fluorescent Bodipy-labeled substrate). Arbitrary units= fluorescence values.

Lower left panel. Kinetics of degranulation from the two cell lines .^{14}C-serotonin release from RBLwt (□) and RBLpld2 cells (○) activated by Fcε-RI cross-linking with DNP-HSA, compared to resting cells (■).

Right panels. Confocal imaging of HA-hPLD2 with antibody directed against the HA tag **(a)**, compared to plasma membrane labeling with cholera toxin **(b)**. Merge between (a) and (b) fluorescence in **(c)**. Enlargement of selected cell **(d)**. Bar= 10µm.

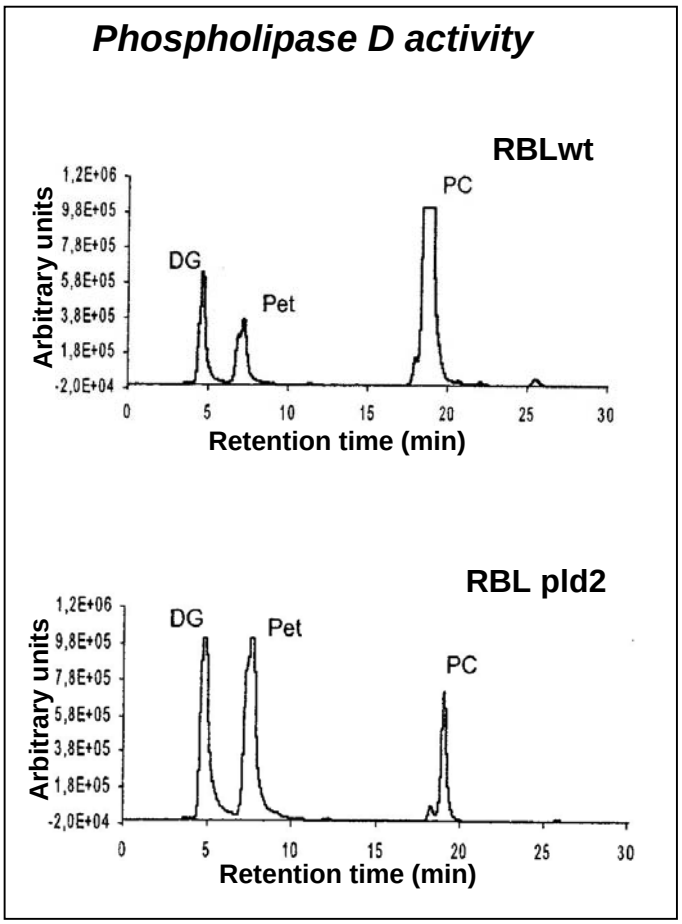
Figure S2 : Characterization of exosomes by nanosizer equipment.

A. Electron microscopy of intralumenal vesicles inside the MultiVesicular Body (MVB) of a RBLwt cell (X40 000). Once released out of the cells, intralumenal vesicles are called “exosomes”.

B. Electronegativity (**Zeta potentials)** of exosomes (“Exos”) derived from RBLwt and from RBLpld$_2$ cells, compared to parent cells (lower right panel). Data are expressed as number of particles (kcps= kilo counts per second) versus their zeta potential expressed in mVolts. Values at the peak were automatically generated by the apparatus (Nano ZS 90, Malvern Instruments). Note that exosomes are about two times more negatively charged than the parent cells.

C. Size distribution of exosomes (“Exos”), derived from RBLwt and RBLpld$_2$ cells. Data represent the distribution (in percent of total) of the vesicle sizes (in nm). Values at the peak were automatically given by the apparatus (Nano ZS 90, Malvern Instruments).

S.data. Fig S1


Phospholipase D activity
RBLwt
PC
DG
Pet
Arbitrary units
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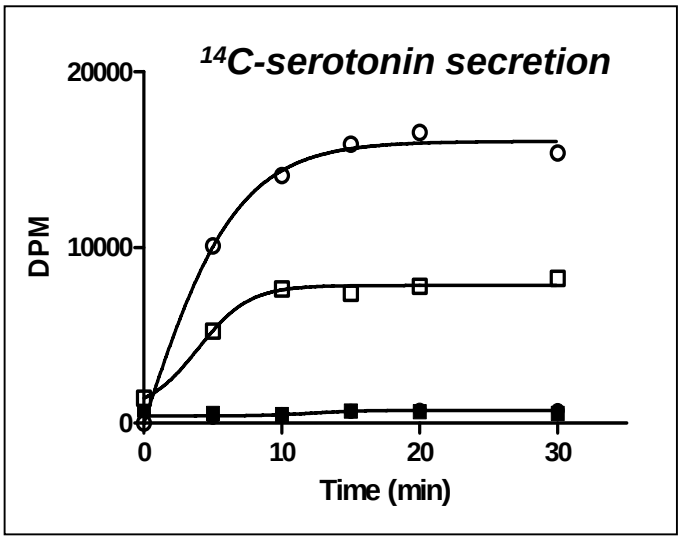
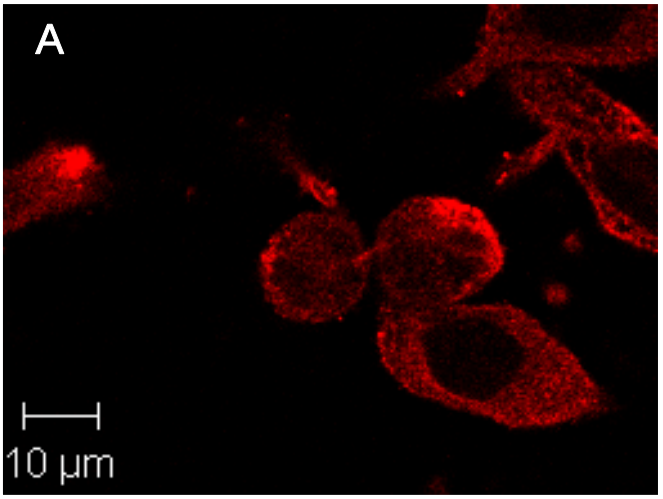
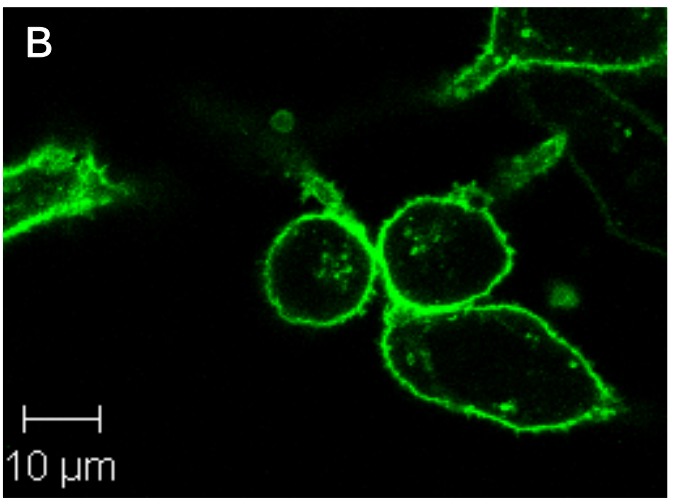
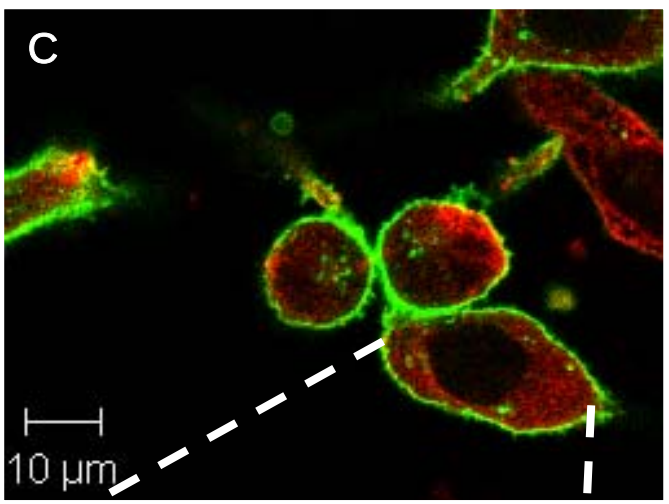
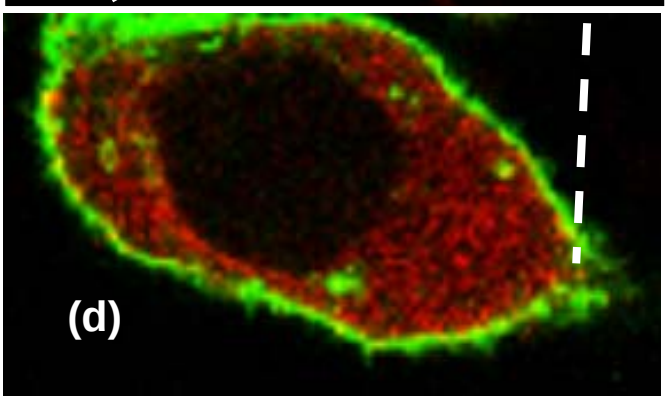
9,8E+05
7,8E+05
5,8E+05
3,8E+05
1,8E+05
-2,0E+04
0
5
10
15
20
25
30
Retention time (min)
RBL pld2
DG
Pet
PC
Arbitrary units
Retention time (min)


14C-serotonin secretion
20000
10000
0
DPM
0
10
20
30
Time (min)


A
10 µm

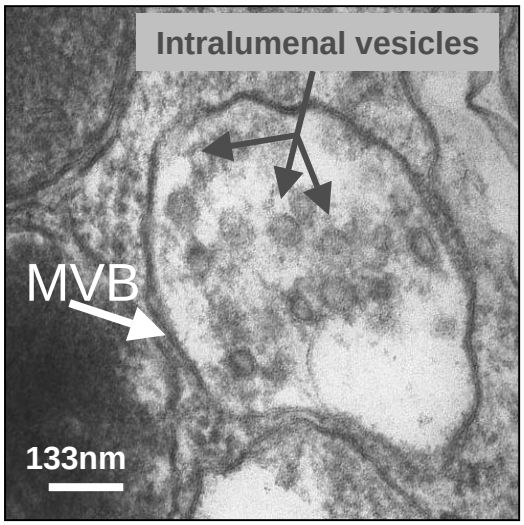

B
10 µm


C
10 µm

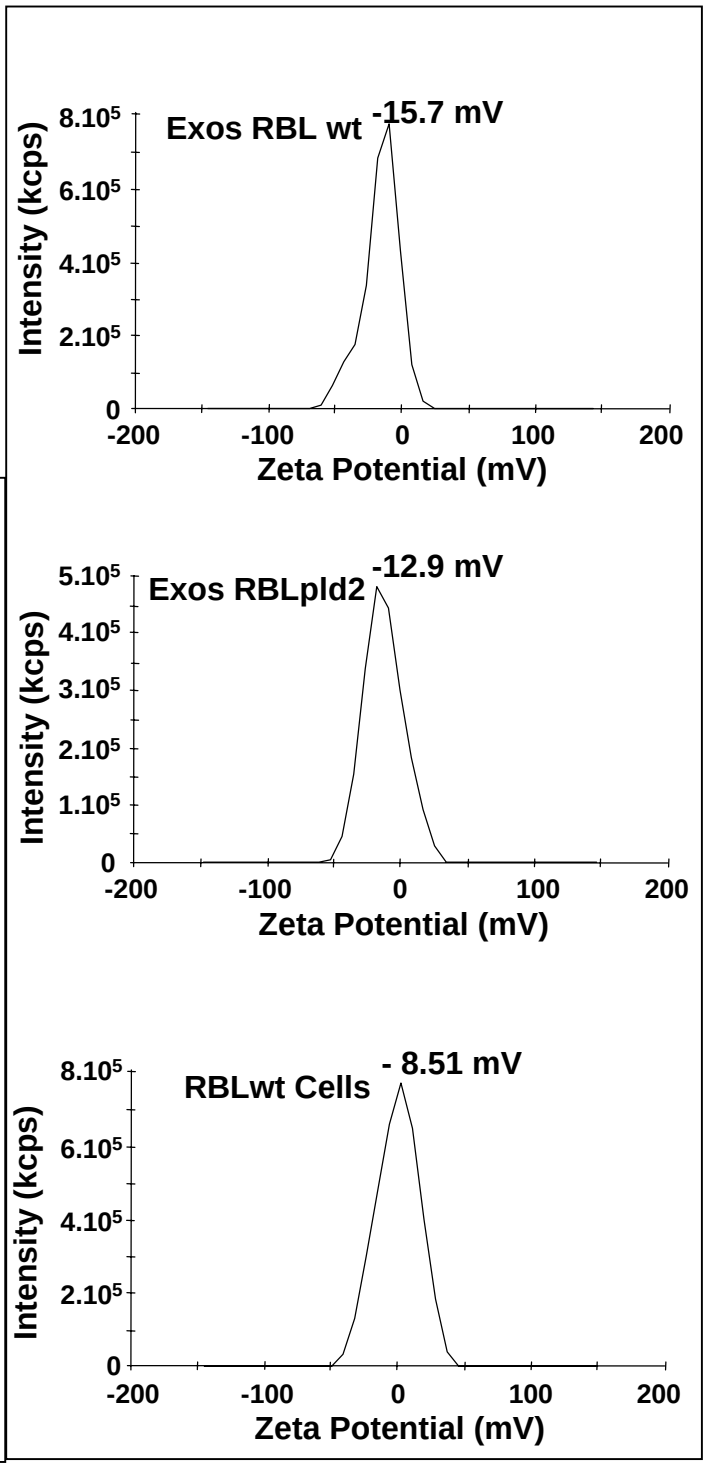

(d)

S.data. Fig S2

A



B-Zeta Potential Distribution



C-Size Distribution