Supplementary material (Python code)
Membrane Targeting and GTPase Activity of Rab7 Are Required for Its Ubiquitination by RNF167

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Supplementary material (Python code)

```
# This code, written in Python 3, is used to analyze Lamp1 distribution. Prior to using the code,
# ImageJ is used to extract Lamp1 fluorescence signal over a line extending from the edge of the
# nucleus (detected using the DAPI signal) to the plasma membrane (detected using the Lamp1 signal).
# Line plots are then exported from ImageJ in csv file format and csv files are successively read and
# analyzed using the following script. The script basically divides the line plot into 10 segments and
# returns the ratio between the average fluorescence signal of segments 2 and 9.

import pandas as pd
import numpy as np

#File selection
myfile = pd.read_csv("002-line-1.csv")

intensities = myfile["Gray_Value"]
backgroundSubstratedIntensities=intensities-min(intensities)

#Selection of the segment close to nucleus
s2 = np.array_split(backgroundSubstratedIntensities, 10) [1]

#Selection of the segment close to plasma membrane
s9 = np.array_split(backgroundSubstratedIntensities, 10) [8]

print("The average intensity of segments 2 and 9 is %.2f and %.2f, respectively" % (np.average(s2),
np.average(s9)))
print("The intensity ratio between segments 2 and 9 is %.3f" % (np.average(s2) / np.average(s9)))

# Script output:
#
# The average intensity of segments 2 and 9 is 647.22 and 1431.30, respectively
# The intensity ratio between segments 2 and 9 is 0.452

# Content of the file "002-line-1.csv":
#
# Distance_(microns),Gray_Value
# 0.0000,253.000
# 0.1083,762.280
# 0.2167,1113.436
# 0.3250,1266.380
# 0.4333,2074.948
# ...
```