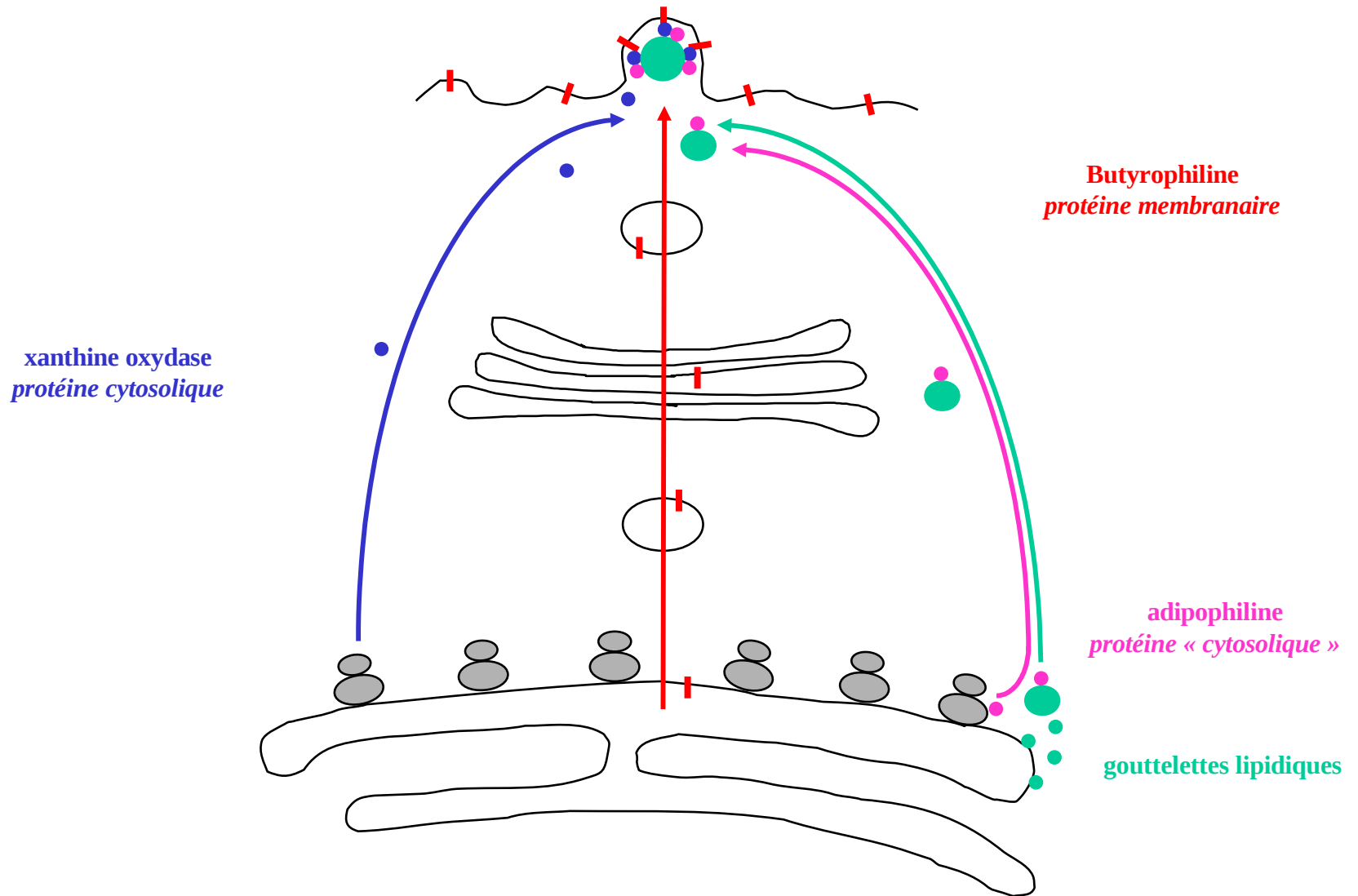
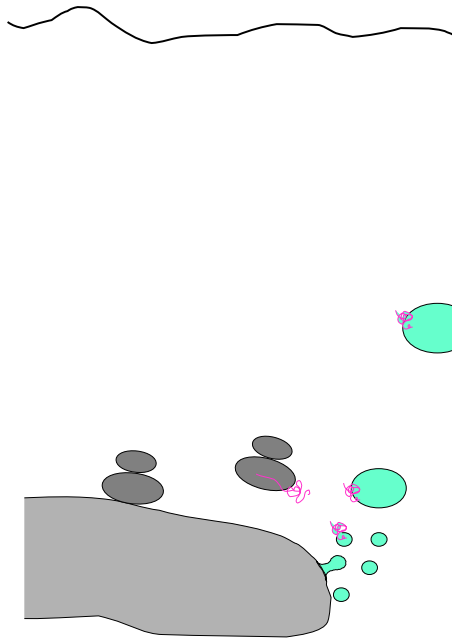


Trafic intracellulaire des protéines constitutives des globules lipidiques



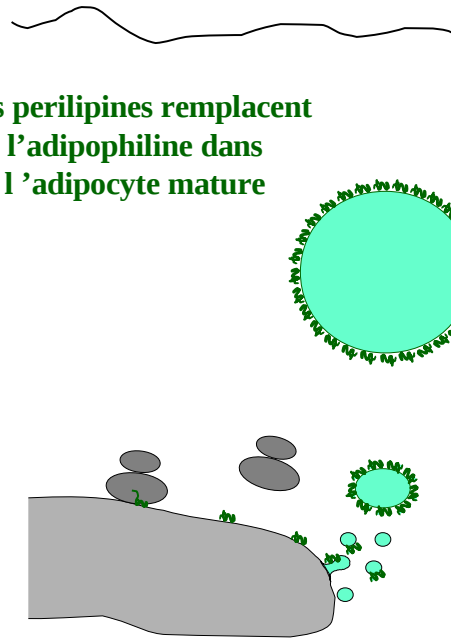
Comparaison des trafics lipidiques entre adipocyte et cellule épithéliale mammaire

Adipocyte immature

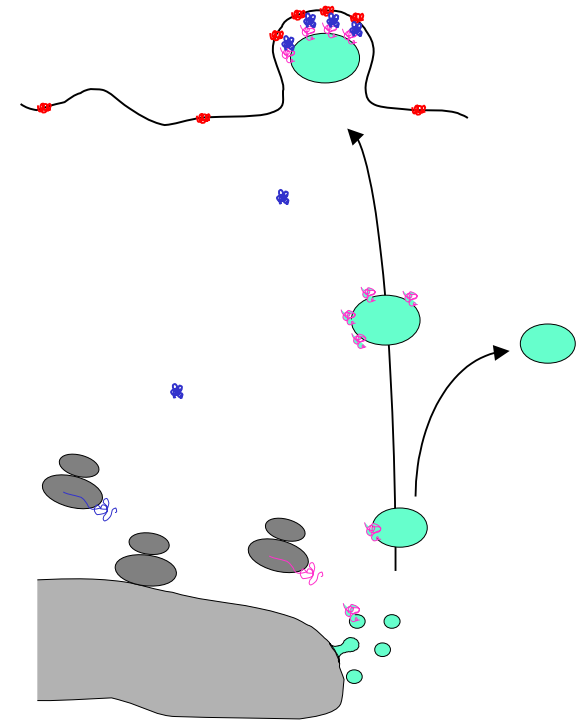


Adipocyte mature

Les perilipines remplacent l'adipophiline dans l'adipocyte mature



Cellule épithéliale mammaire en lactation



Reversible transdifferentiation of secretory epithelial cells into adipocytes in the mammary gland

Manrico Morroni[†], Antonio Giordano[†], Maria Cristina Zingaretti[†], Romina Bolani^{*}, Rita De Matteis^{*}, Barbara B. Kahn[†], Enzo Nisoli[§], Cristina Tonello[§], Catalina Pisoschi[§], Michele M. Luchetti^{||}, Mariella Marelli^{*}, and Saverio Cinti^{*,***}

Institutes of [†]Anatomy and Internal Medicine, School of Medicine, University of Ancona, Via Tronto 10/A, 60020 Ancona, Italy; [‡]Division of Endocrinology, Diabetes, and Metabolism, Harvard Medical School, 99 Brookline Avenue, Boston, MA 02215; [§]Center for Study and Research on Obesity, Laboratorio Interdisciplinare Tecnologie Avanzate Vialba, Luigi Sacco Hospital, Via G. B. Grassi 74, 20157 Milan, Italy; and ^{||}University of Medicine and Pharmacy, Strada Petru Rareș 4, 200349 Craiova 1100, Romania

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La TIP47 présente une forte homologie avec l'adipophiline / périlipine

45% d'homologie avec l'adipophiline / périlipine (60% identique et 80% similaire dans la partie N-terminale)

```
Adipophilin 1 -----MASVAVEPQLSVVTRVANLPLVSSSTYDLVSSAYISRK
TIP47 1 MSADGARADGSTQVTVEEPVQQPSVVDRAVSMPLISSCTCDMVSAAYASTK
Perilipin 1 -----MAVNKGLTLLDGDLPEQENVLQRVLQLPVVSGTCECFQKTYTSTK

Adipophilin 38 DQYFYLKSLCEMAEKGKMTITSVAVTSALEPIQKLEPQIAVANTYACKGL
TIP47 51 ESYPHVKTVCDAAEKGVRTLTAADVSGAQPILSKLEPQIASASEYAHRRGL
Perilipin 46 EAHPLVASVCNAYEKGVSASSLAAWSMEPVVRRLLSTQFTAANELACRGL

Adipophilin 88 DRIEKLPIILNPTNQVVANAKGAMTGAKDAVTTTGTGAKDSVASTITGV
TIP47 101 DKLEENLPILOQPTTEKVLADTKELVSSKVSQAQEMVSSAKDTVATQLSEA
Perilipin 96 DHLEEKIPALQYEPEKIASSELKDTIS-----TLRSLARNSSISVPIAST

Adipophilin 138 VDRTRGAVTGSVEKTKSVVSGSINTVLRSLVMQLMSSGVENALTKSELLV
TIP47 151 VDATRCAGVQSGVDKTKSVVTGGVQSVMGSRLLGQMVLSCVDTVLQKSEBWA
Perilipin 139 SDKVLGAALAGCELAWGVARDTAEFAANTBAGRLASGCADLALGSIEKVV

Adipophilin 188 DQYLLPLTKDELEKEAKKVEGFDVMQKP-----SYVVRDGLSLSTKLRSRA
TIP47 201 DNHLPLTDAELARIATSLDGFDAVSVQQQRQEQSYFVRDGLSLSERLRQHA
Perilipin 189 EYLLPADKEESAPAPGHQQAQKSPKAKP-----SLLSRVGCALTNTLSRYT

Adipophilin 232 YQQALCRVEEAERKQGQETISQLHSAFNLSELARKNVHNANQKIQDAQDKL
TIP47 251 YEHSGLKLRATKQRAQEALLQLSQALSMLMETVKQGVDD--OKLVEGQEKL
Perilipin 234 VQTMARALEQG---HTVAMWIPGVVPLSSLAQWQASVAMQAVSRRRSEV

Adipophilin 282 YLSWLEWKRSI---GYDDTDESHCAEHIESRTLAIAARNLTQQLQTMCHT-
TIP47 298 HQMWLSWNQKQ---LQGPEKEPPKPEQVESRALTMFRDIAQQQLQATCTS-
Perilipin 280 RVPWLHSLAAQSEEDHEDQTDTEGEDTEEEELTEENKFSVAALPGPR

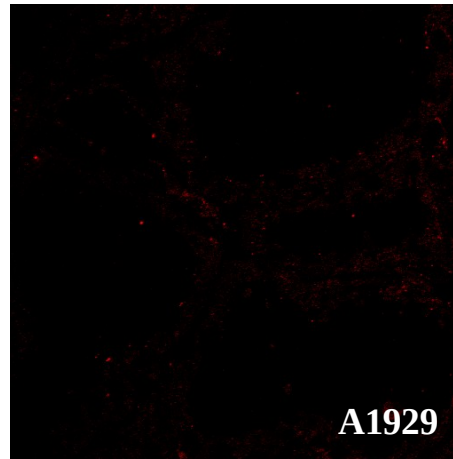
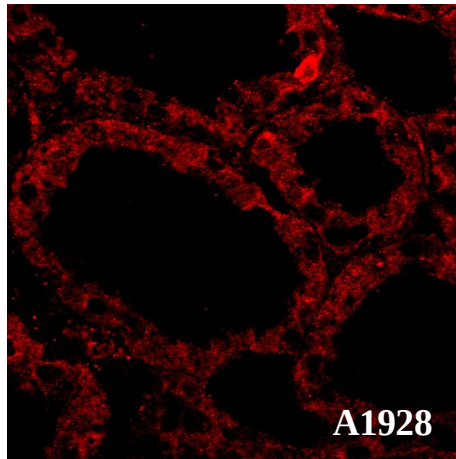
Adipophilin 328 --LGLNIIQGLFPQNIQDRANHLGVMAGDIYSVFRNAASFKEVSDGLLASKK
TIP47 344 --LGSSIQGLFTNVKDQVQQARRQVEDLQATFSSIHSFQDLSSSILAQSR
Perilipin 330 GLLGGAHTLQKTLQTTISAVTWAPAAVLGMAGRVLHLTPAPAVSSTKGR

Adipophilin 376 GQ--LQKMKESLDDVMDYLVNNTPLNWL-----VGPVYPQVTESESAQAP
TIP47 392 ER--VASAREALDHMVEYVAQNTPTVTWL-----VGPVAFGITEKAPEEKK
Perilipin 380 AMSLSDALKGVTDDNVVDTVVHYVPLPRLSLMEPESEPRDIDNPPAEVERR

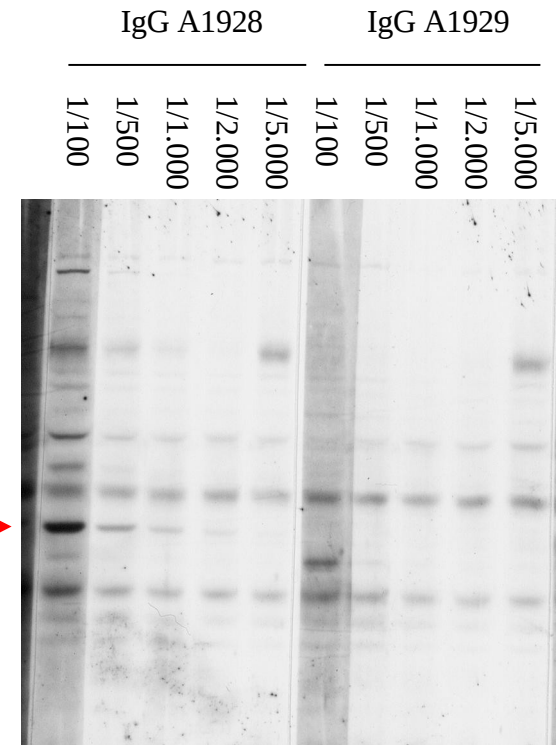
Adipophilin 419 GTTRRPG-----RWSRKHPKPVVPSNAEGSQPDDSSS--
TIP47 -----
Perilipin 430 EAERRASGAPSAAGPEPAPRLAQPRSLRSAQSPGAPPGPGLDEVATPAA

Adipophilin -----
TIP47 -----
Perilipin 480 PRPGFFAVPREKPKRRVSDSFFRPSVMEPIVGRTHYSQLRKKS
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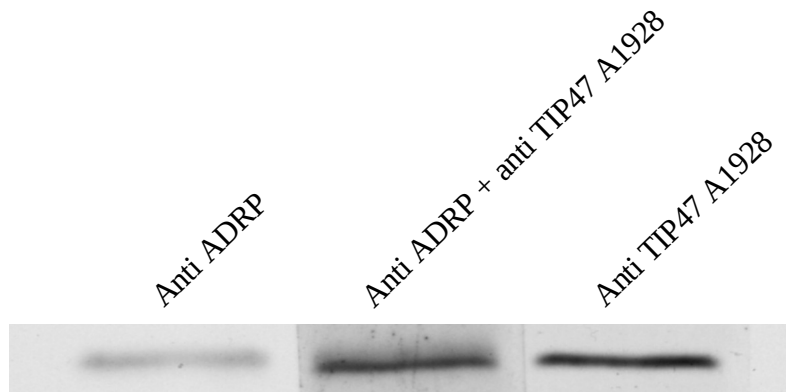
Caractérisation des sérums anti TIP47 préparés chez le lapin



Coupe de glande mammaire de rate en lactation : immunofluorescence

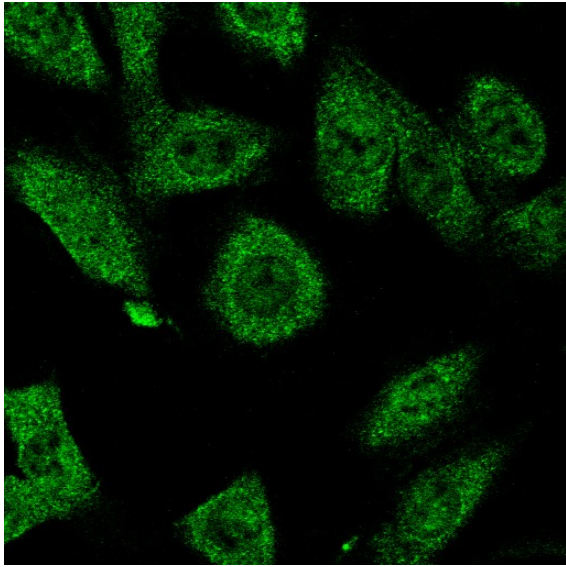


WB : 30 min exposition

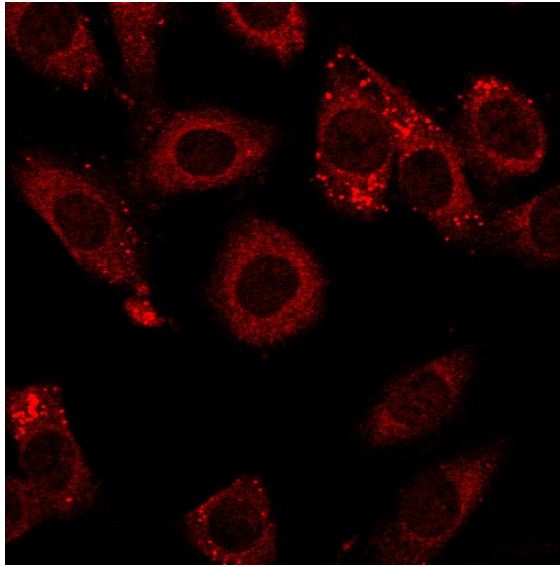


Les anticorps anti TIP47 de rat ne reconnaissent pas l'adipophiline

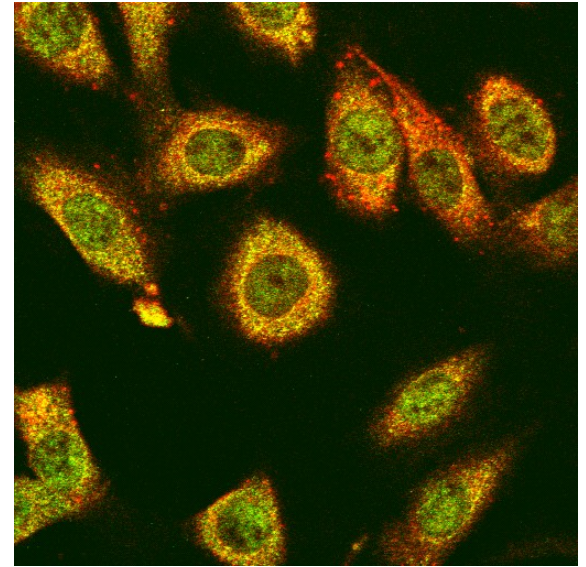
Colocalisation partielle de la TIP47 avec les gouttelettes lipidiques : cellules NRK



anti TIP47 A1928 1/100



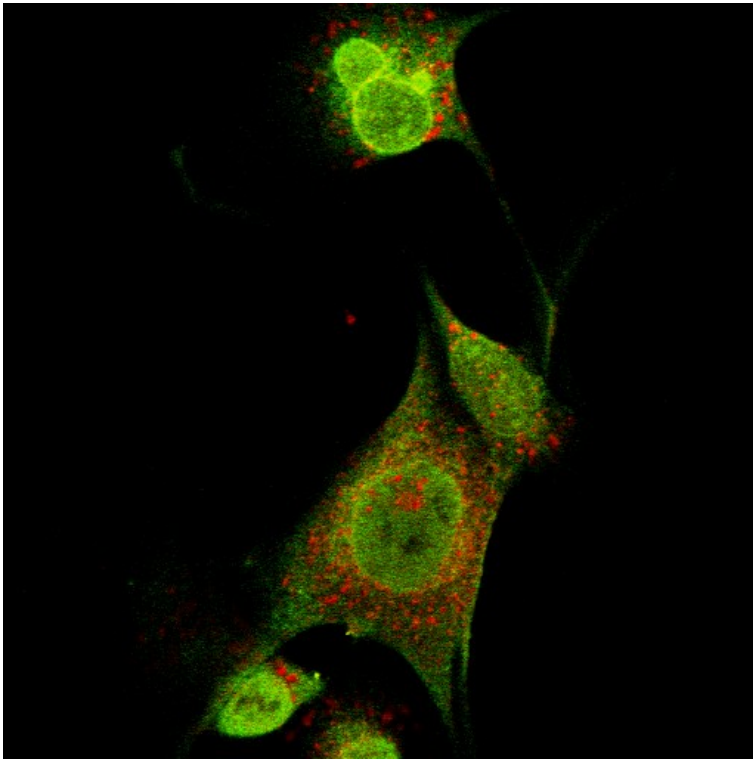
Red Nile 1/5.000



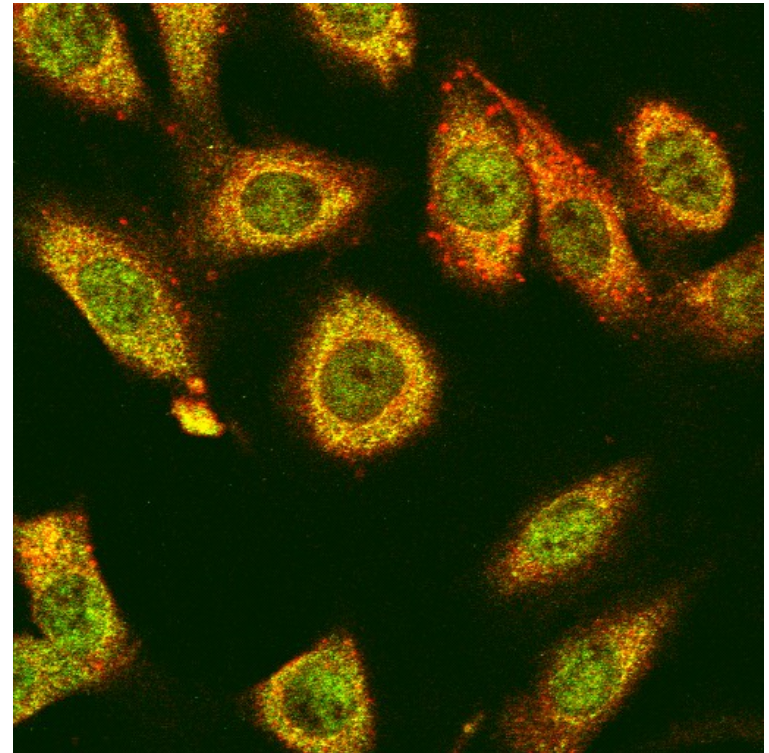
composite

Attention aux artefacts !!

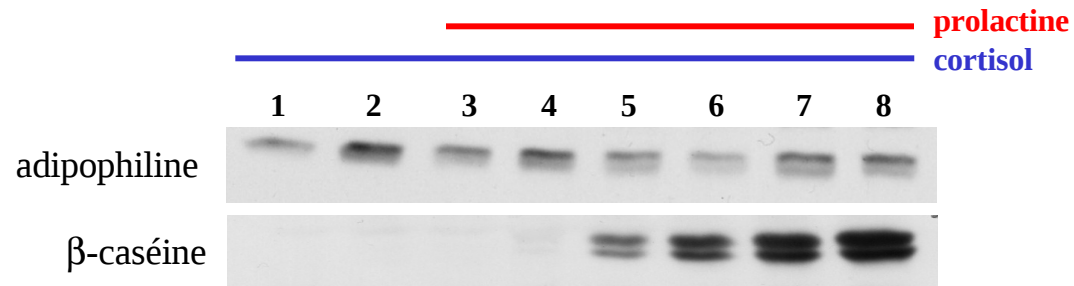
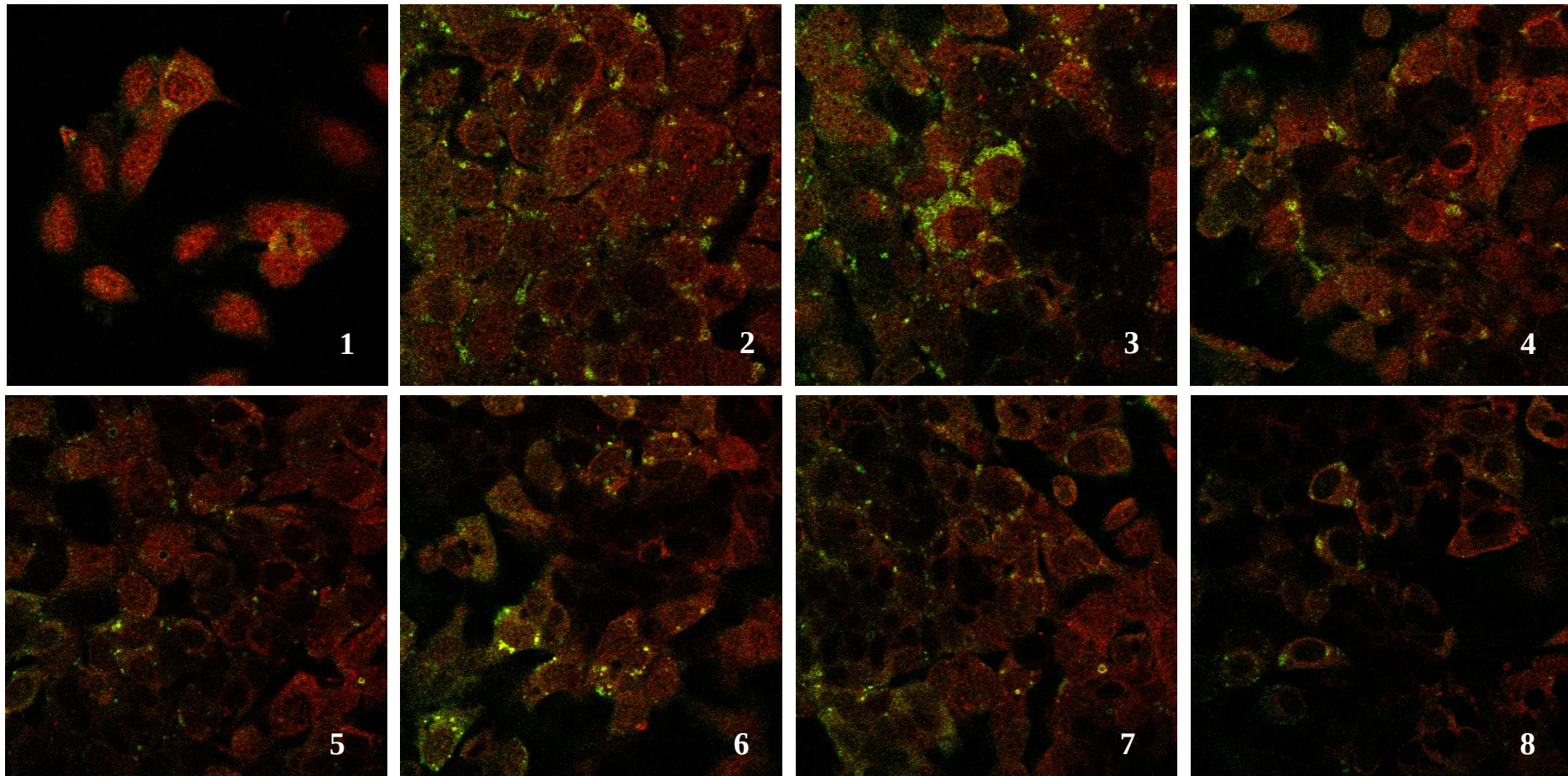
NRK A1928+ O-red oil



NRK A1928 + Red Nile

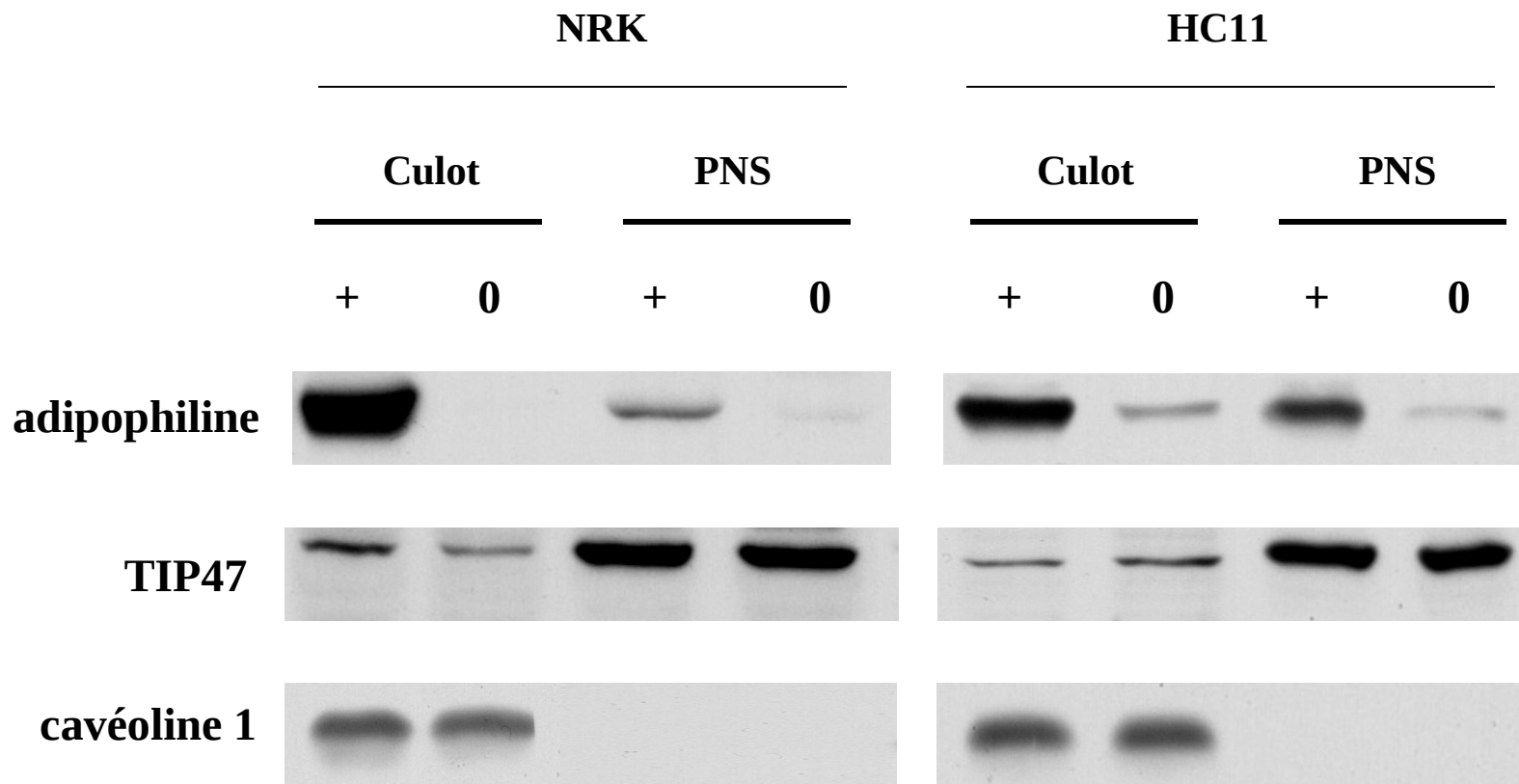


Action du corticol-prolactine sur la distribution de la **TIP47** et de l'**adipophiline** dans les cellules HC11



Action de l'acide oléique sur les cellules NRK et HC11

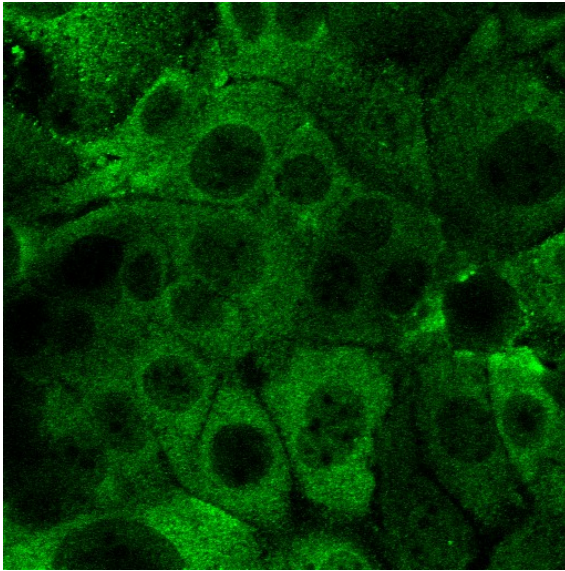
Les cellules sont cultivées 20 h en présence ou non de BSA-acide oléique (100 μ M : 600 μ M)



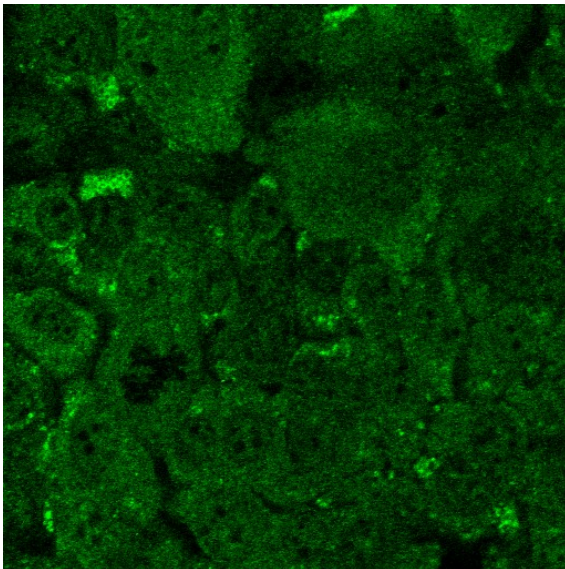
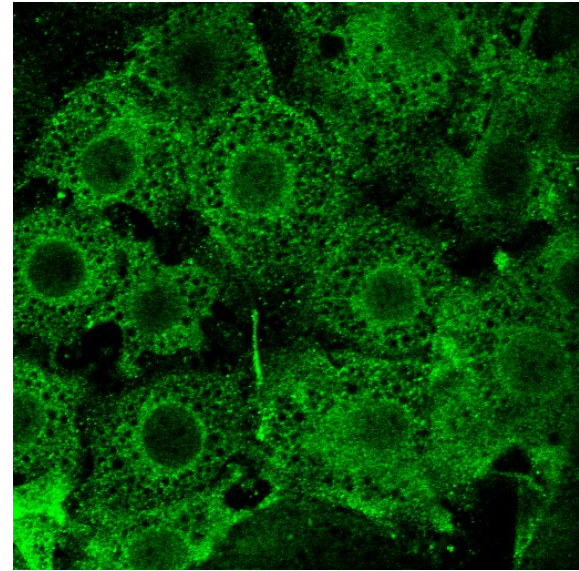
Action de l'acide oléique sur la distribution de la TIP47 et de l'adipophiline sur les gouttelettes lipidiques des cellules HC11

contrôle

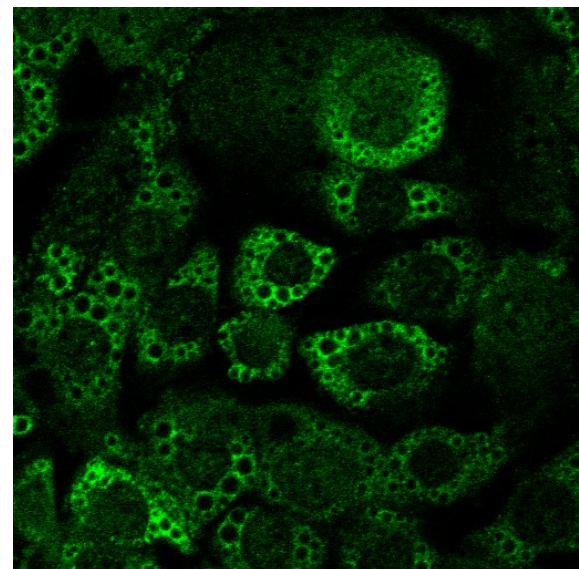
acide oleique



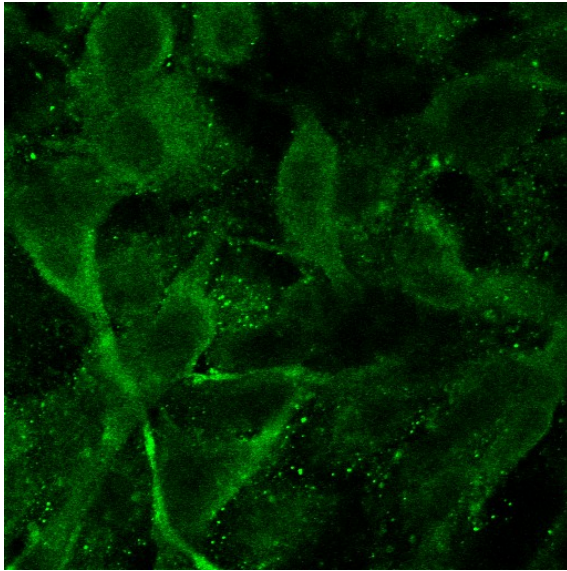
TIP47



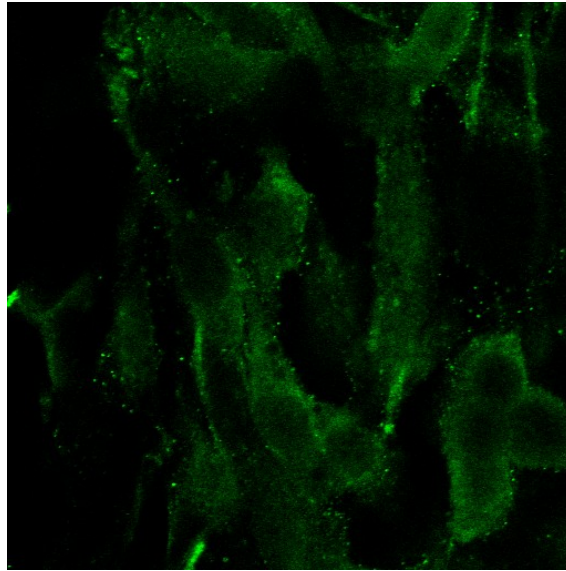
adipophiline



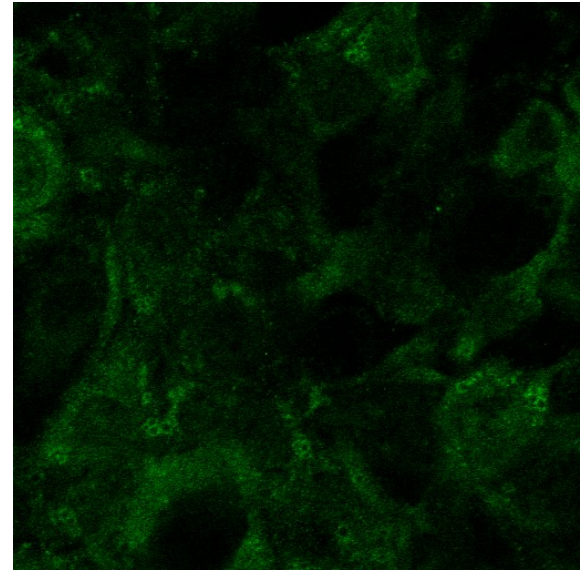
NRK A1928



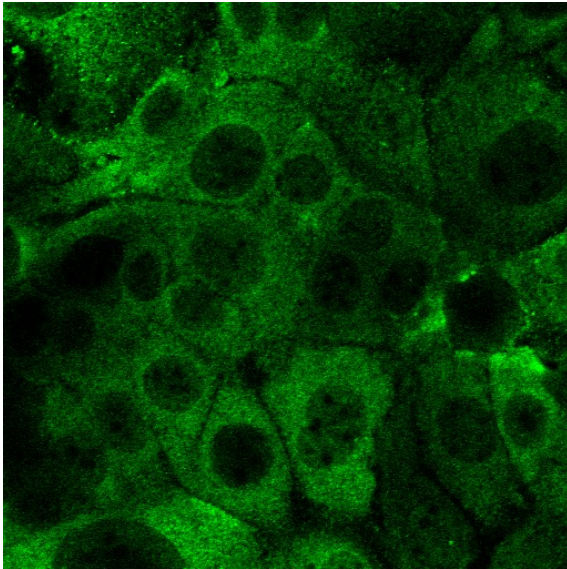
NRK A1928 + acide oléique



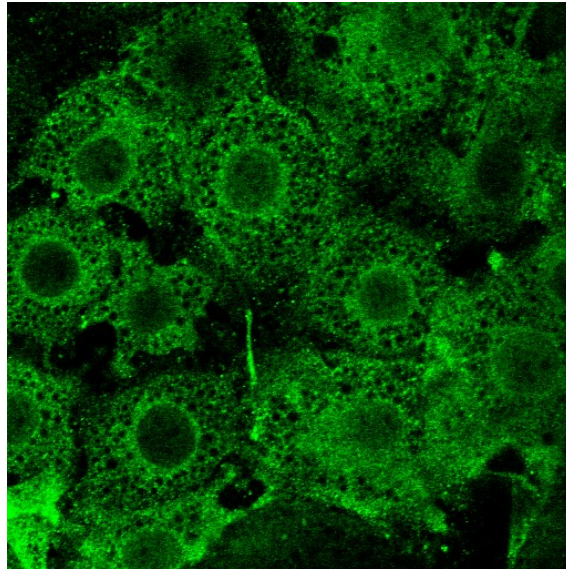
NRK ADRP + acide oléique



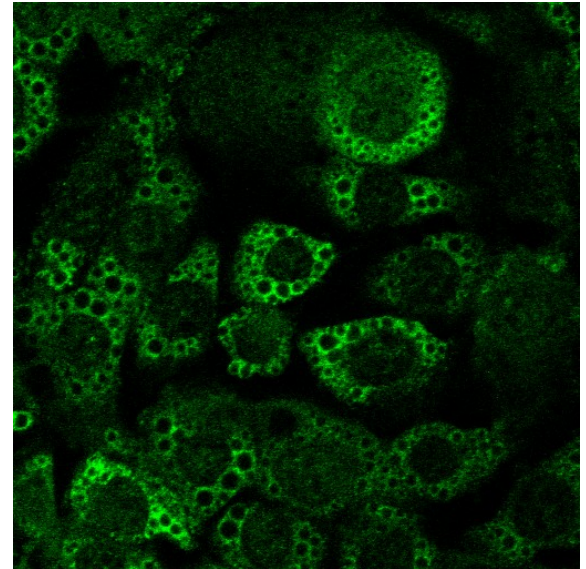
HC11 A1928



HC11 A1928 + acide oléique



HC11 ADRP + aide oléique

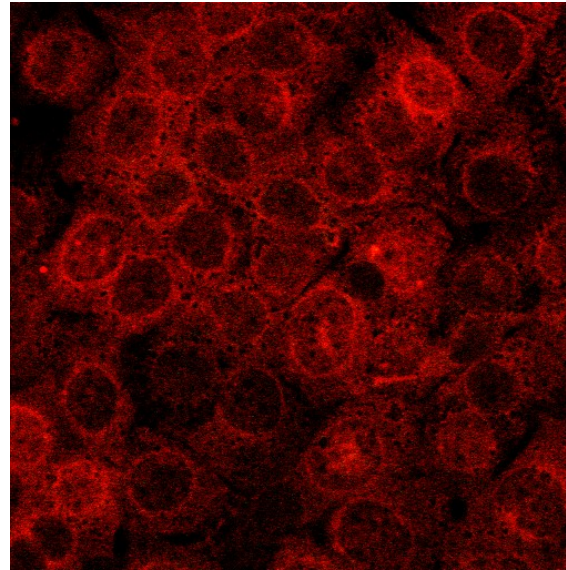
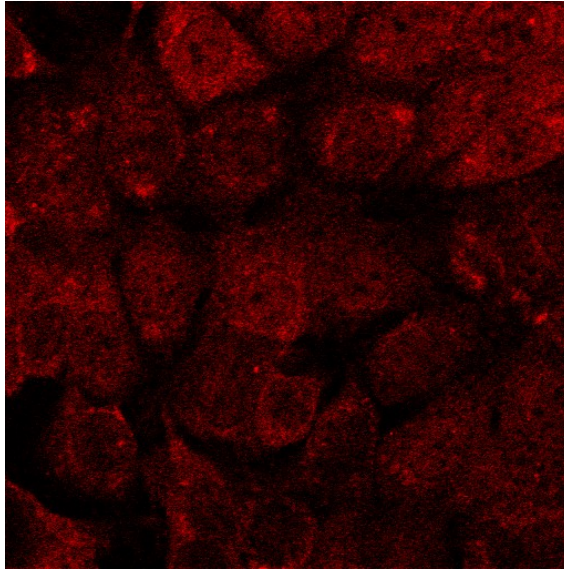


Action de la BFA sur la distribution de la TIP47 et de l'adipophiline dans les cellules HC11

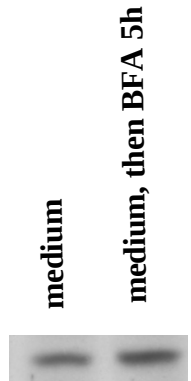
contrôle

BFA (10 μ g/ml, 5 h)

TIP47



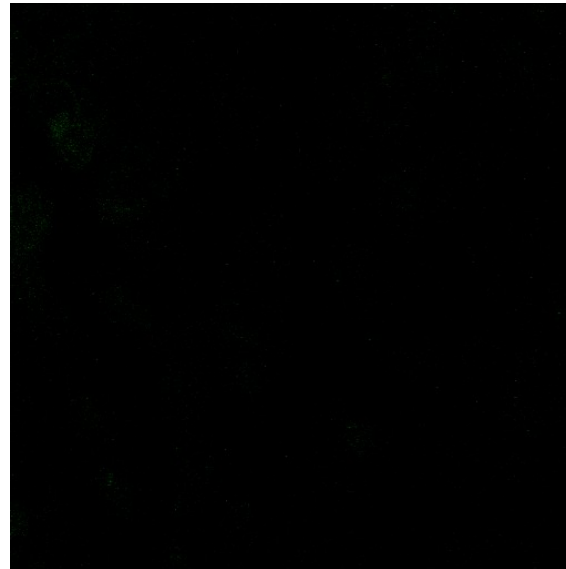
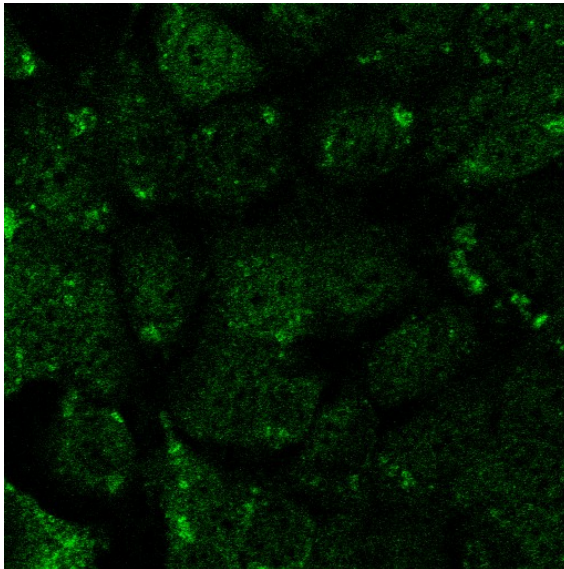
TIP47



adipophiline



adipophiline

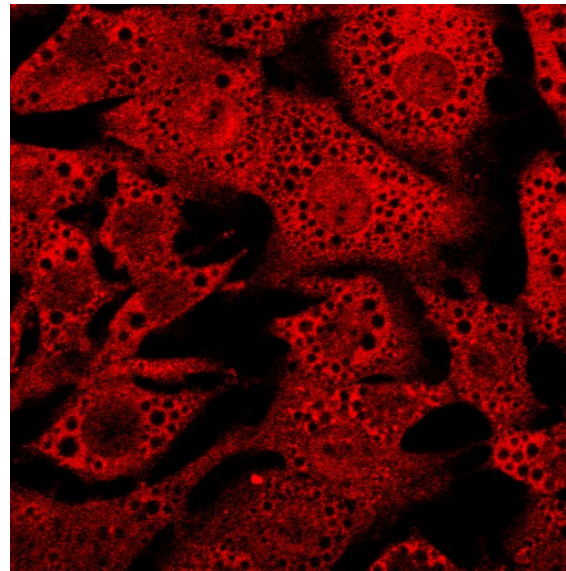
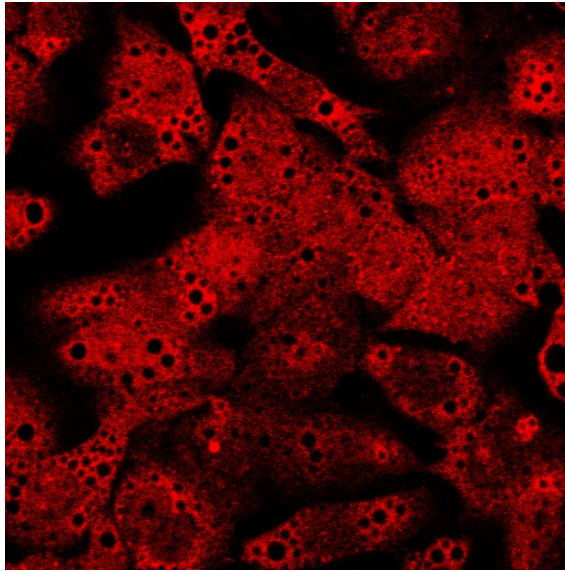


Action de la BFA sur la distribution de la TIP47 et de l'adipophiline dans les cellules HC11 après traitement par l'acide oléique

contrôle

BFA (10 μ g/ml, 5 h)

TIP47



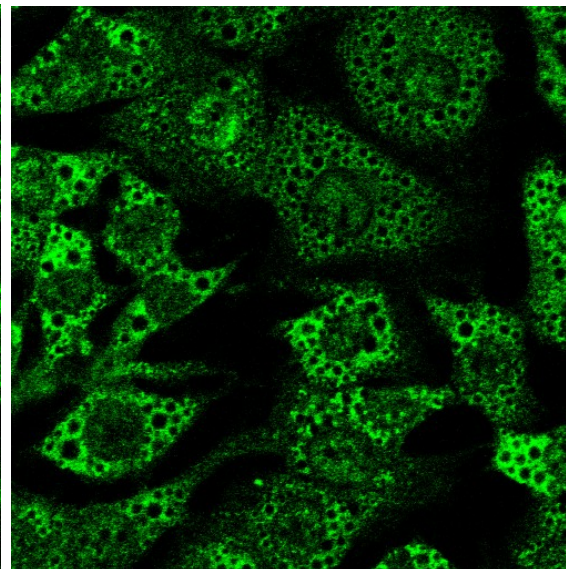
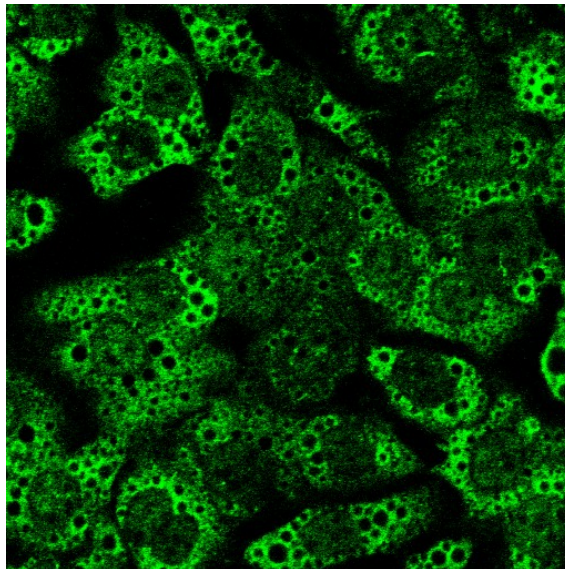
oleic acid
oleic acid, then BFA 5h

TIP47



adipophiline

adipophiline



Action de la BFA sur la distribution des gouttelettes lipidiques marquées au bodipy 493/503 dans les cellules HC11 après traitement par l'acide oléique à faible concentration

