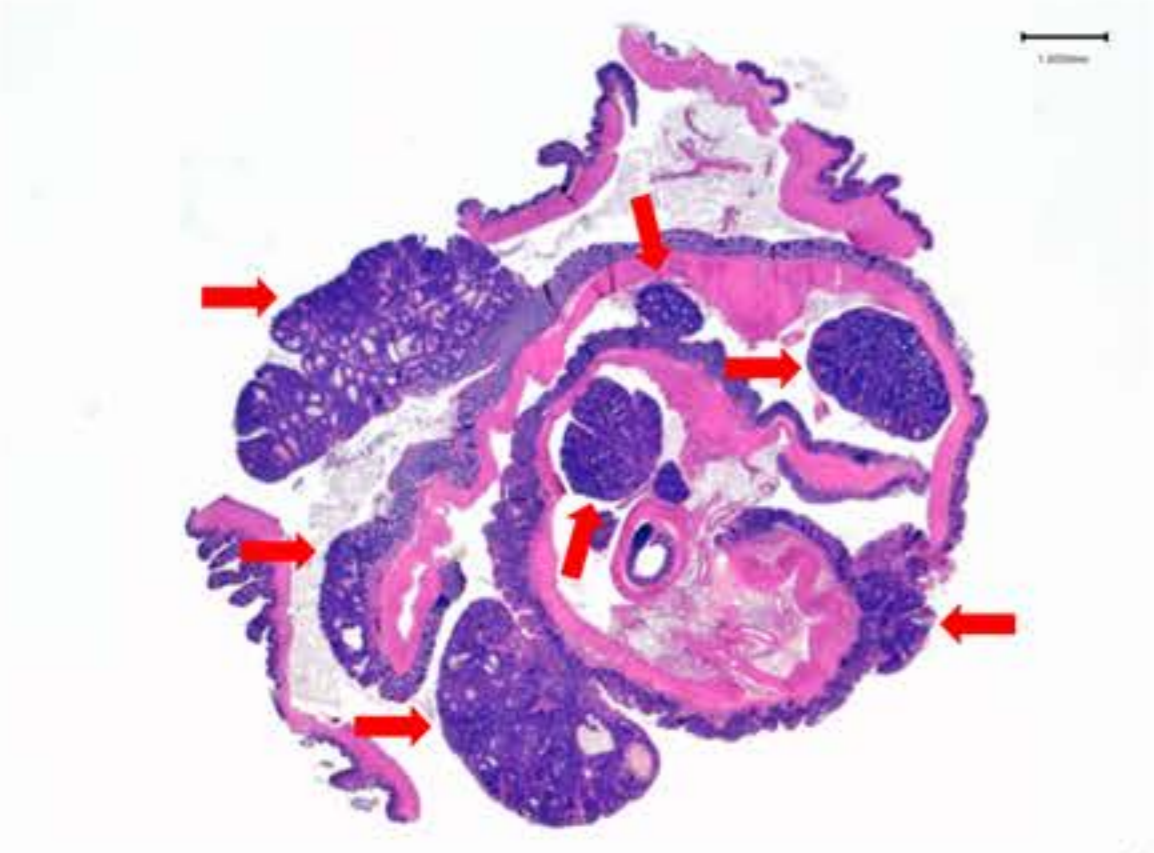
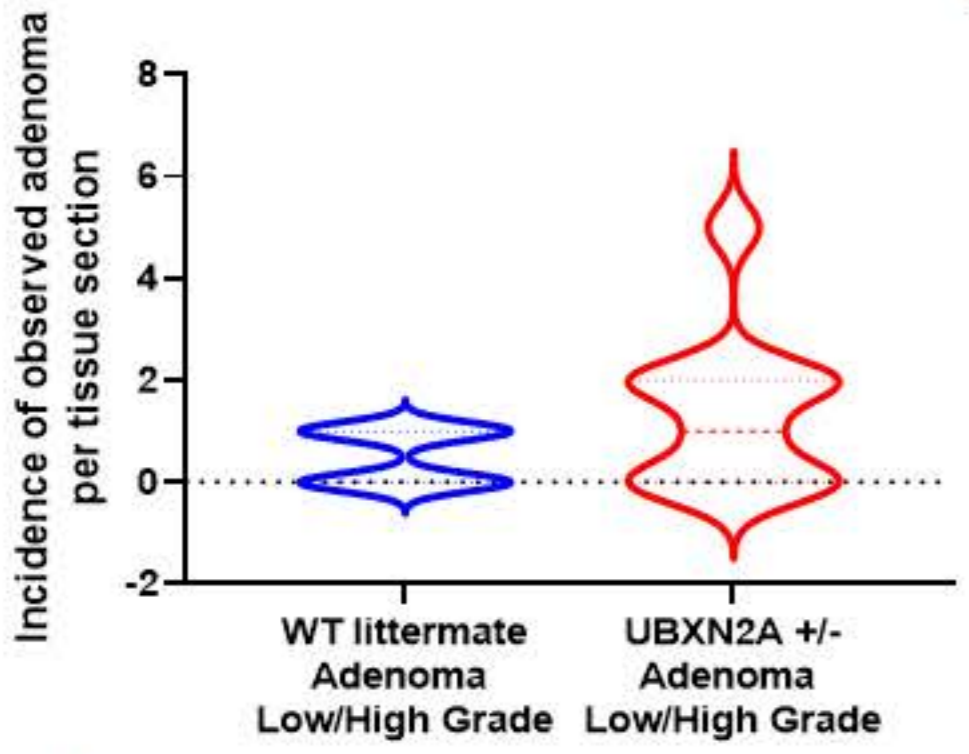
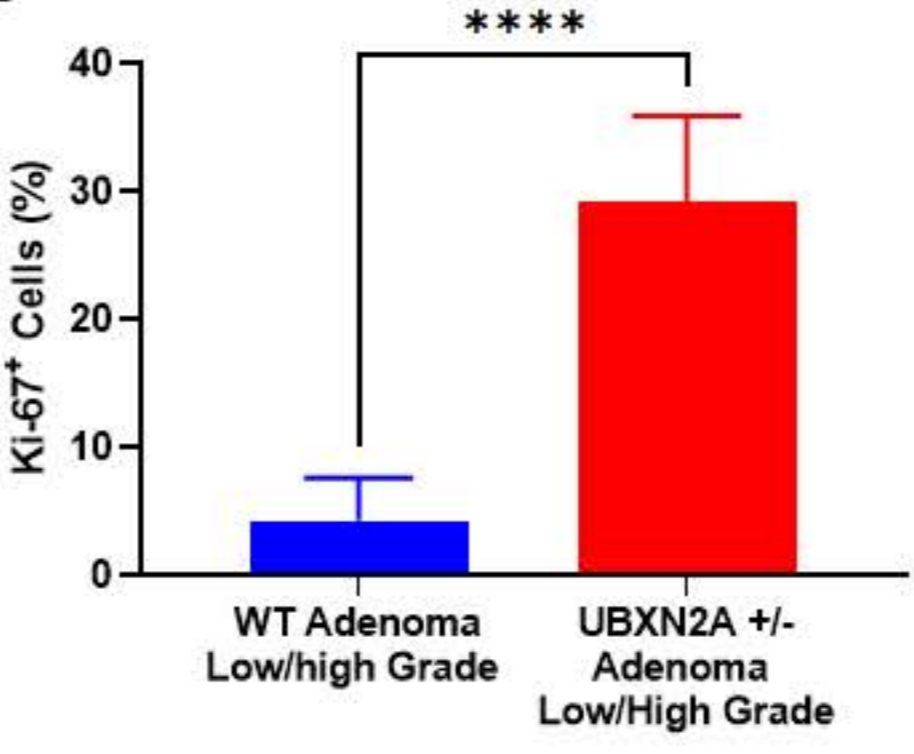
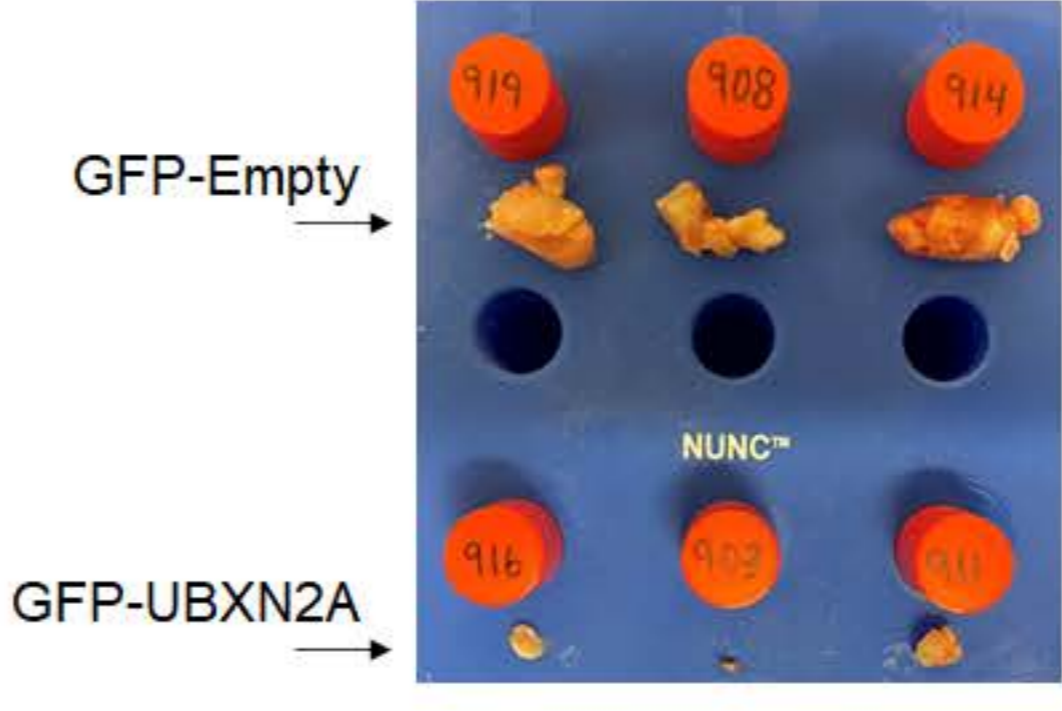
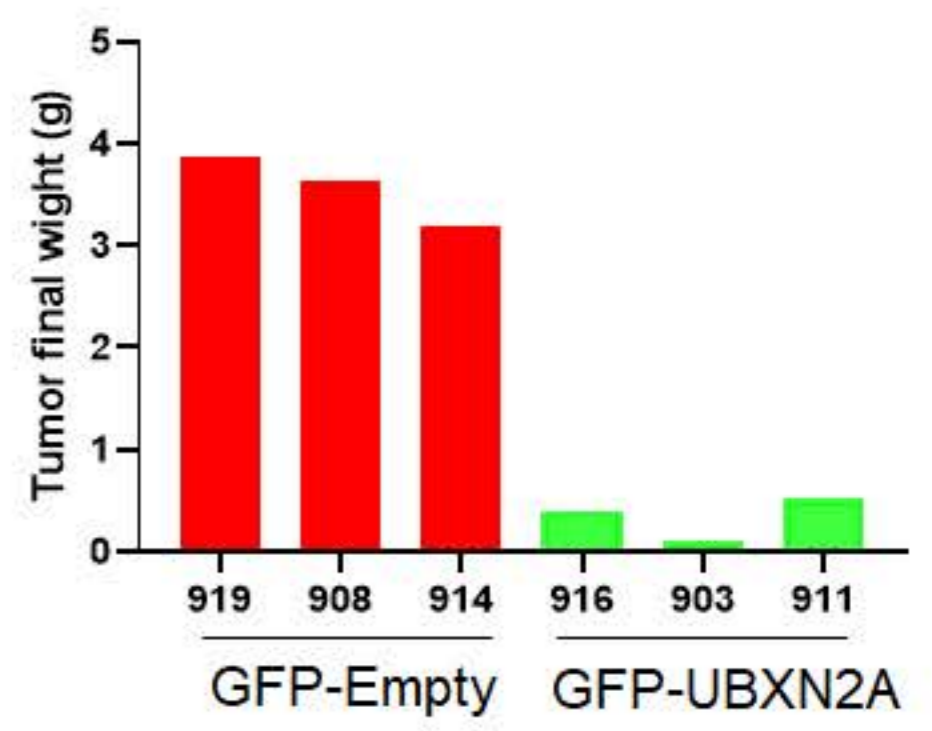
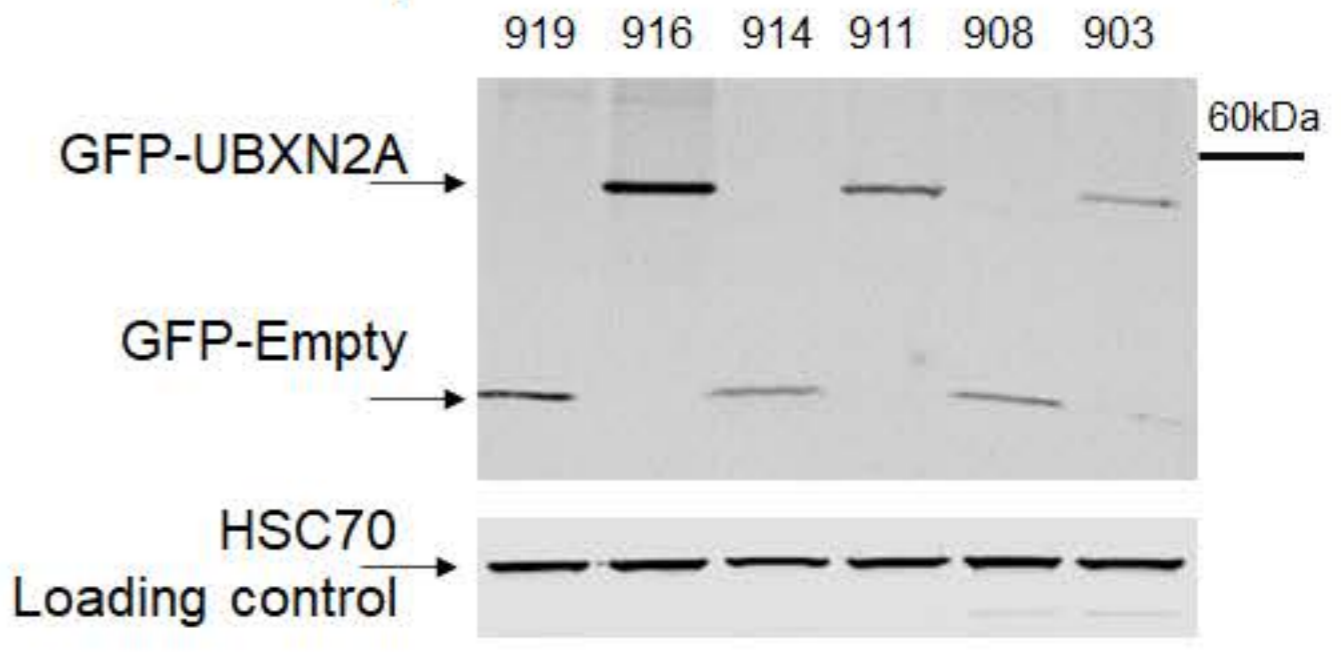
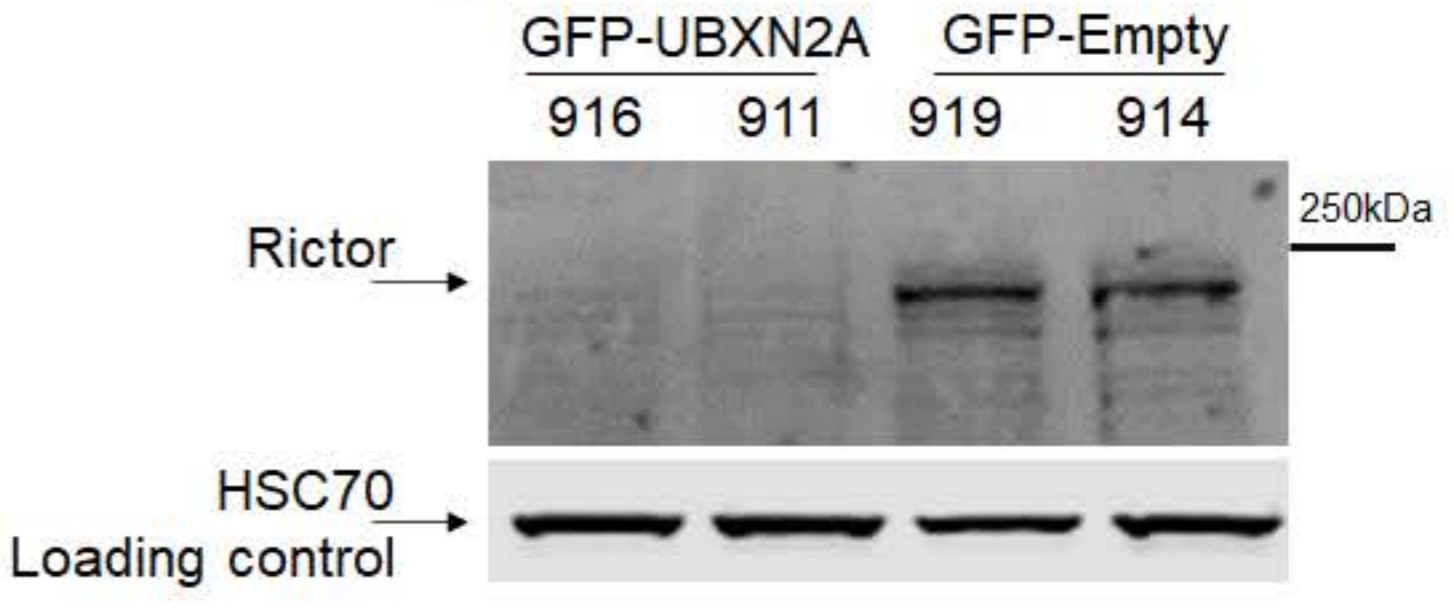


A

Green arrow = low grade adenoma
Red arrow = high grade adenoma

Animal ID	Genotype	Hyperplasia	Herniation	Inflammation	Adenoma (#)	
					low grade	high grade
89	HET	1	0	0	1(7)	

B**C****D****E****F****G****H**

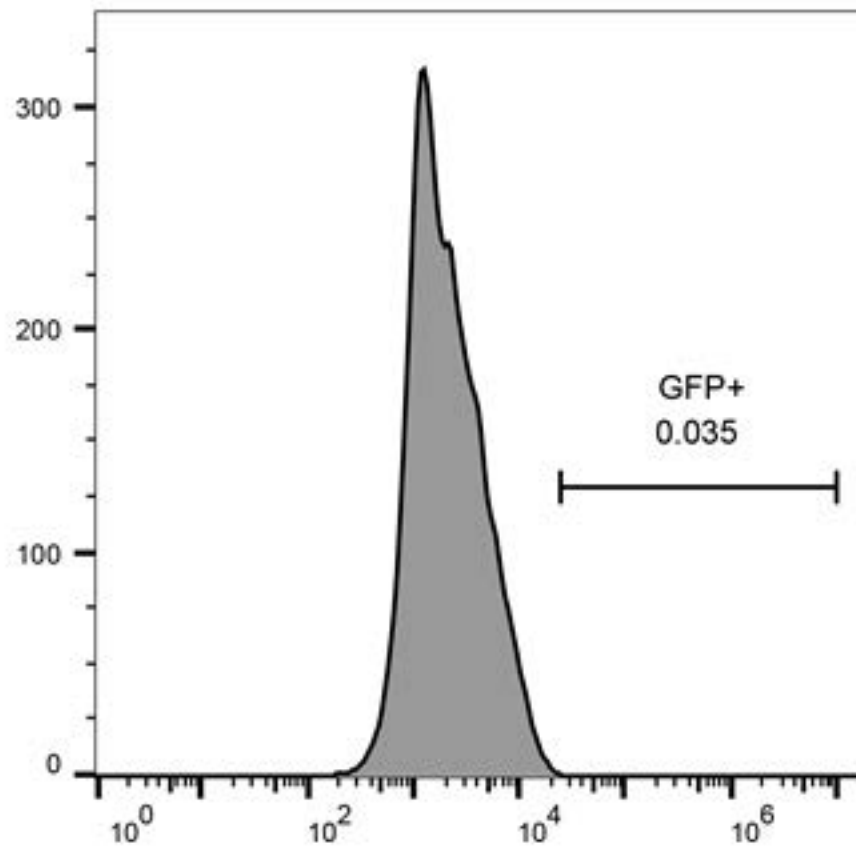
PDXs	gender	age	sample type	histological type	location	BMI	Alcohol	Smoker	CEA ng/ml	CA19-9 U/ml	Tumor size
I	f	85	Carcinoma	Adenocarcinoma	Right colon	22.8	no	no	4.4	3.29	5.5
II	f	68	Carcinoma	Adenocarcinoma	Right colon	27.5	no	no	5.56	3.43	7,5x7
III	m	77	Carcinoma	Adenocarcinoma	Right colon	25.9	yes	no	1.59	11.7	2,5x2,5
IV	m	83	Carcinoma	Adenocarcinoma	Rektosigmoid	32.4	no	no	0.8	6.89	n.a.
VI	m	52	Carcinoma	Adenocarcinoma	Right colon	26.2	yes	no	n.a.	n.a.	9x14
VI	f	88	Carcinoma	Adenocarcinoma	Right colon	35.9	no	no	n.a.	n.a.	2,2x2,2
VII	f	67	Carcinoma	Adenocarcinoma	Right colon	22.3	no	no	8.48	115	6x6
VIII	f	59	Carcinoma	Adenocarcinoma	Left colon	29	yes	yes	17.9	n.a.	11,5x6,5

I

PDXs	Therapy
I	primary resection, no adjuvant treatment
II	primary resection, no adjuvant treatment
III	one-stage resection of right colon and hepatic metastasis (Met1) (R0) followed by FOLFOX (13.08.2013-24.09.2013), followed by 7 cycles of FU/FA (05.11.2013-28.01.2014), followed by 2 cycles of FOLFIRI + bevacizumab (03.07.2014-?). Recidive liver meta foll
IV	palliative sigmoid resection and liver biopsy, palliative treatment with 12 cycles of FOLFOX (15.07.2014- 15.01.2015) due to new recurred metastases
VI	primary resection, no adjuvant treatment
VI	primary resection, no adjuvant treatment
VII	primary resection, adjuvant treatment 1 month Capecitabine (01.03.2008- 12.04.2008) followed by 1 month of 5-FU/ FA (MAYO protocol) 23.06.2008-18.08.2008
VIII	primary resection, no adjuvant treatment

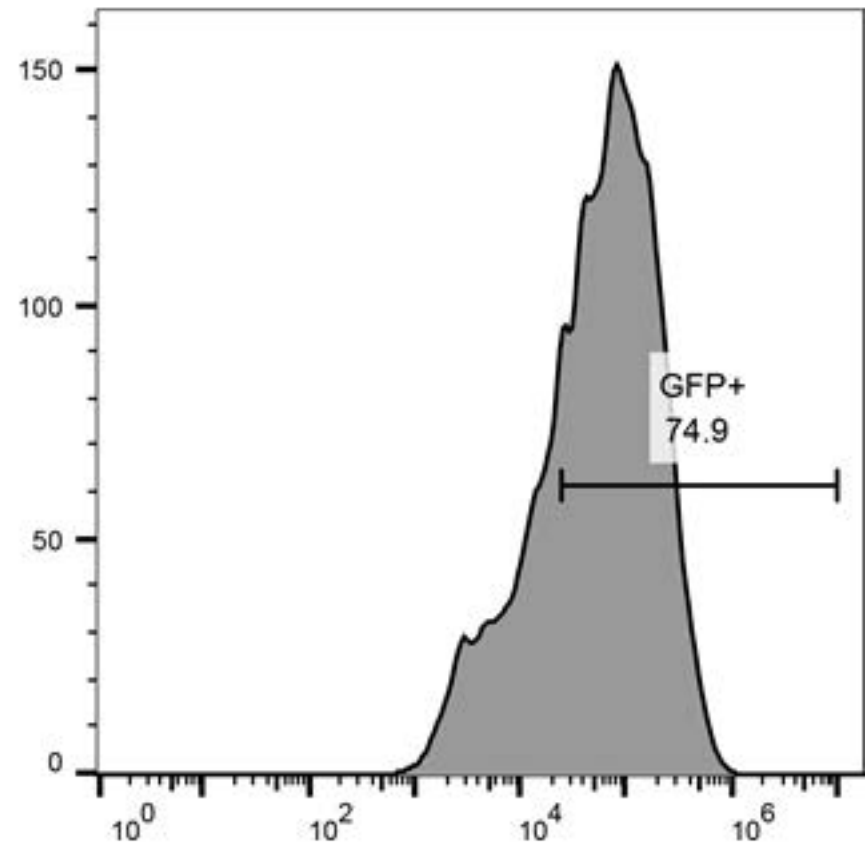
GFP-Empty
No Dox

A



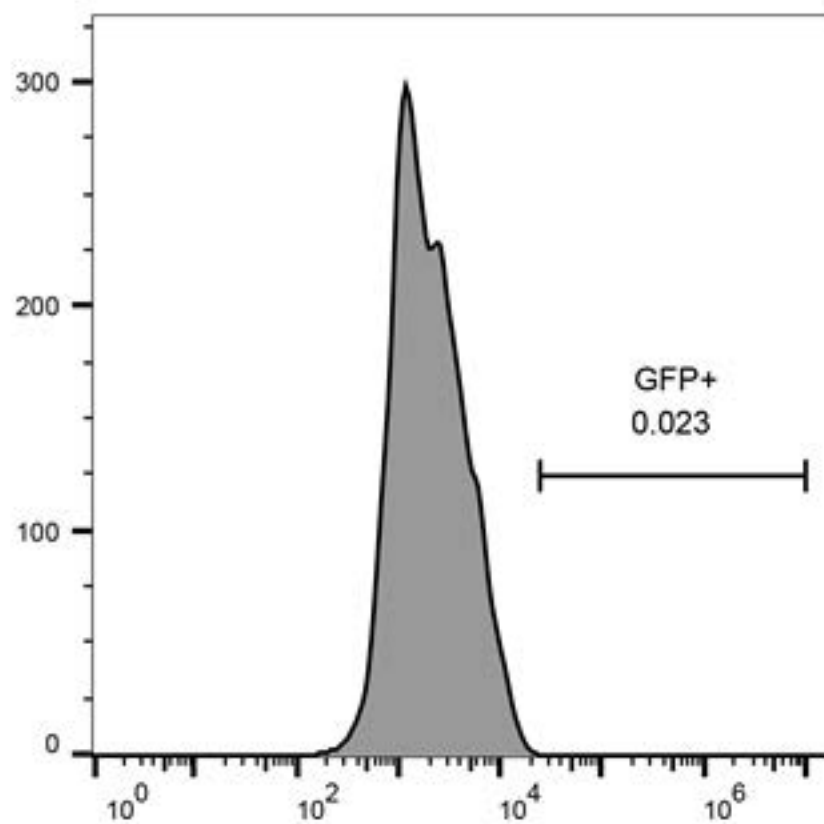
GFP-Empty
Plus Dox

B



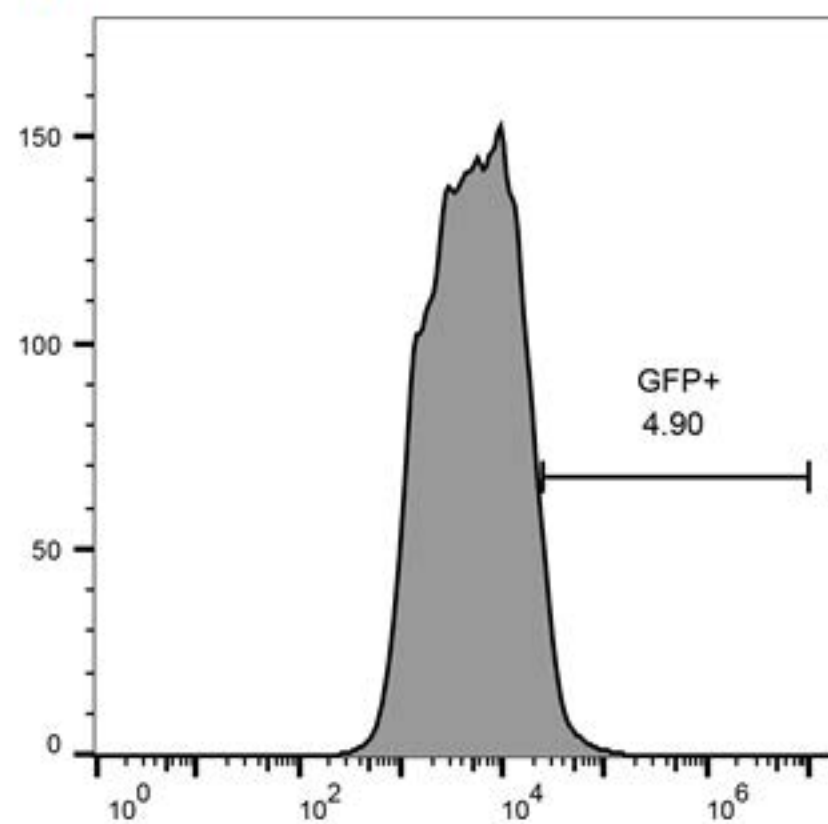
GFP-UBXN2A
No Dox

C

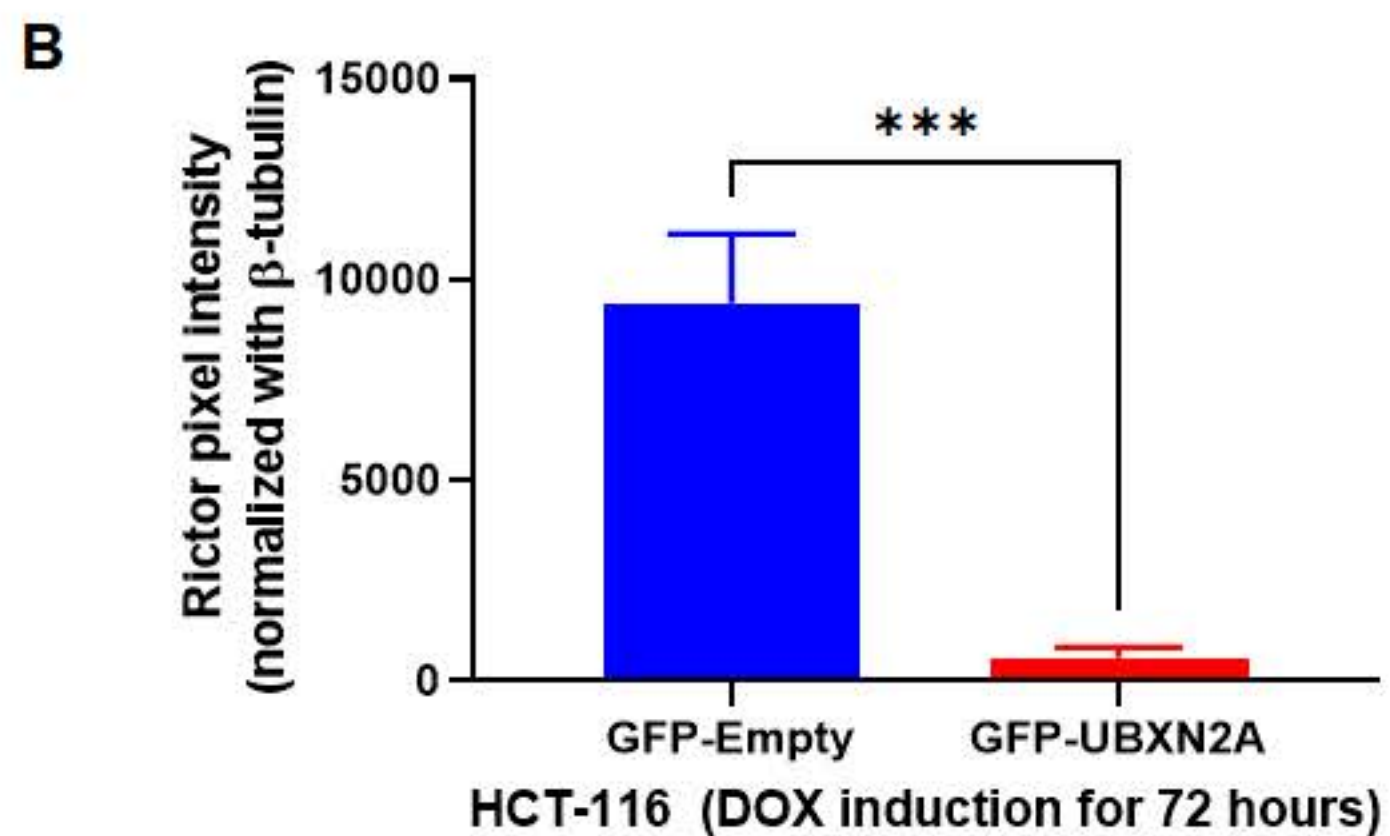
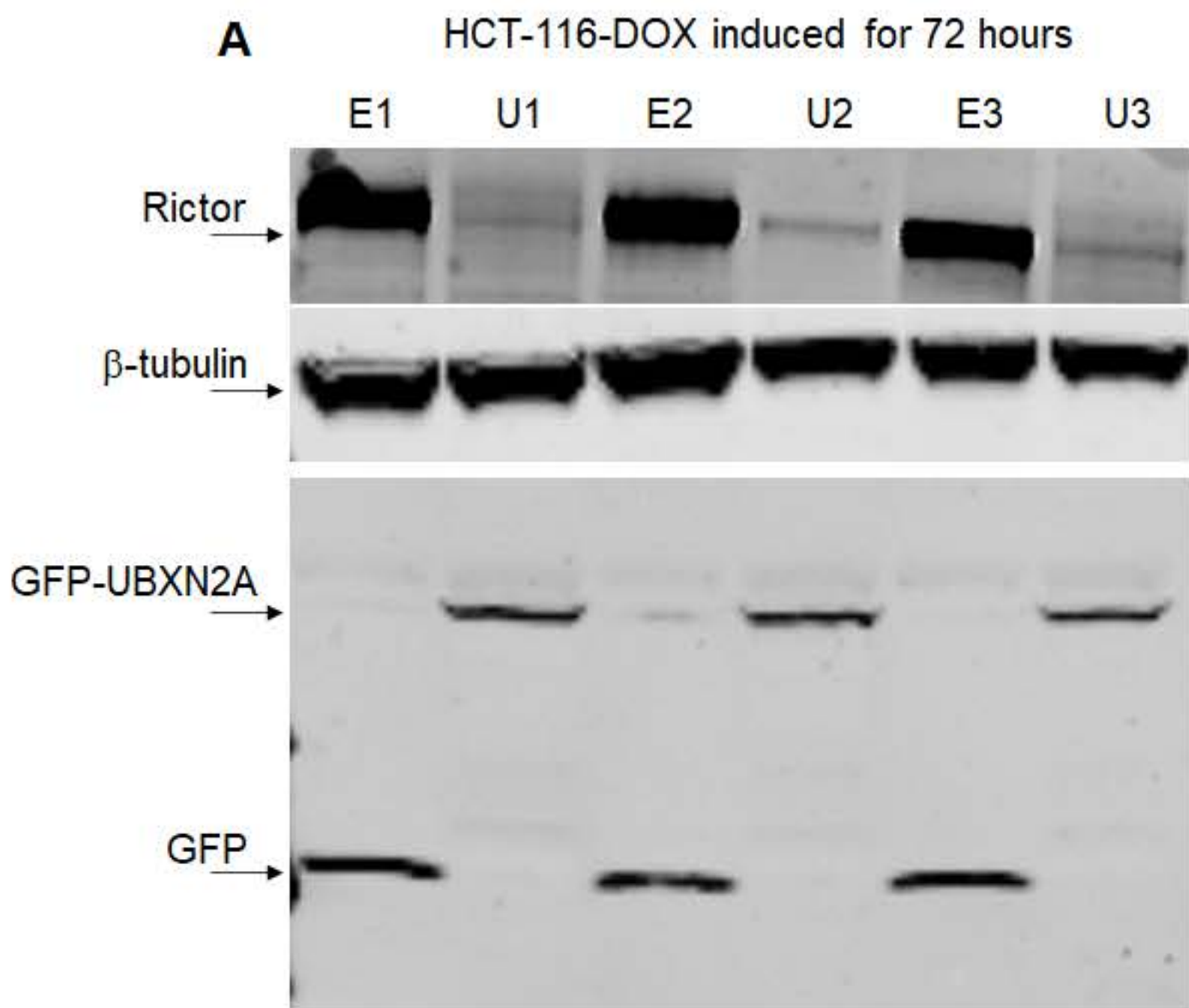


GFP-UBXN2A
Plus Dox

D

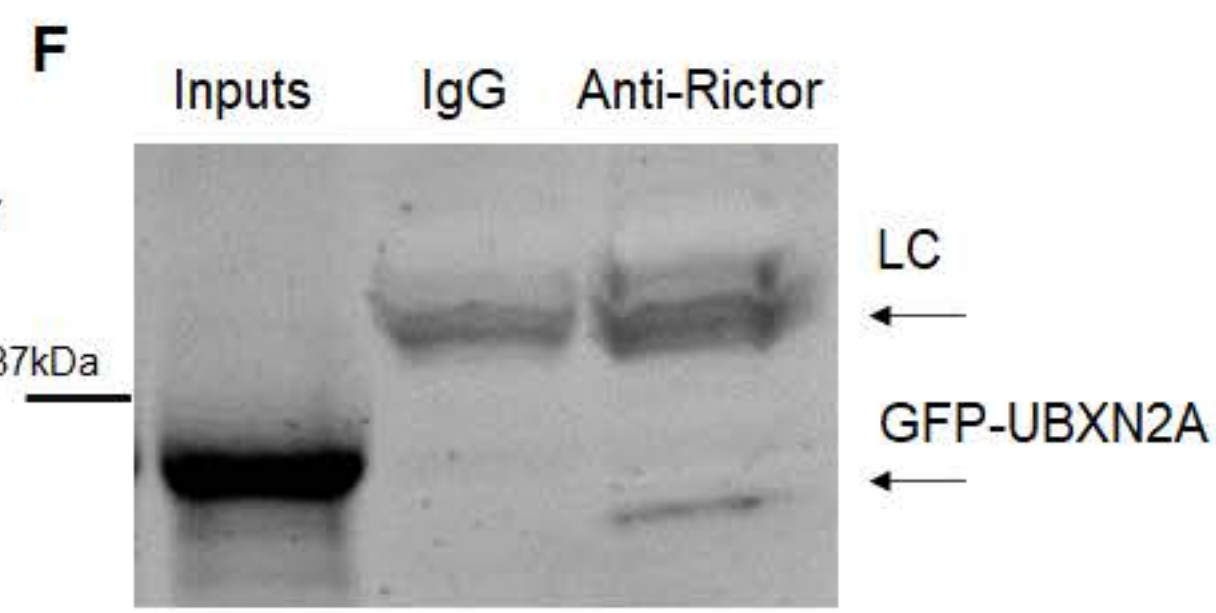
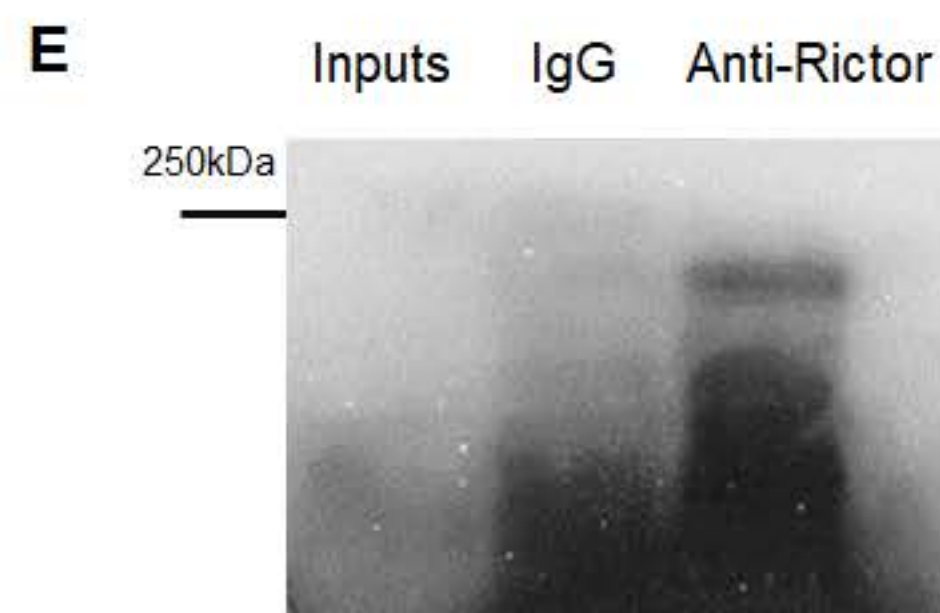
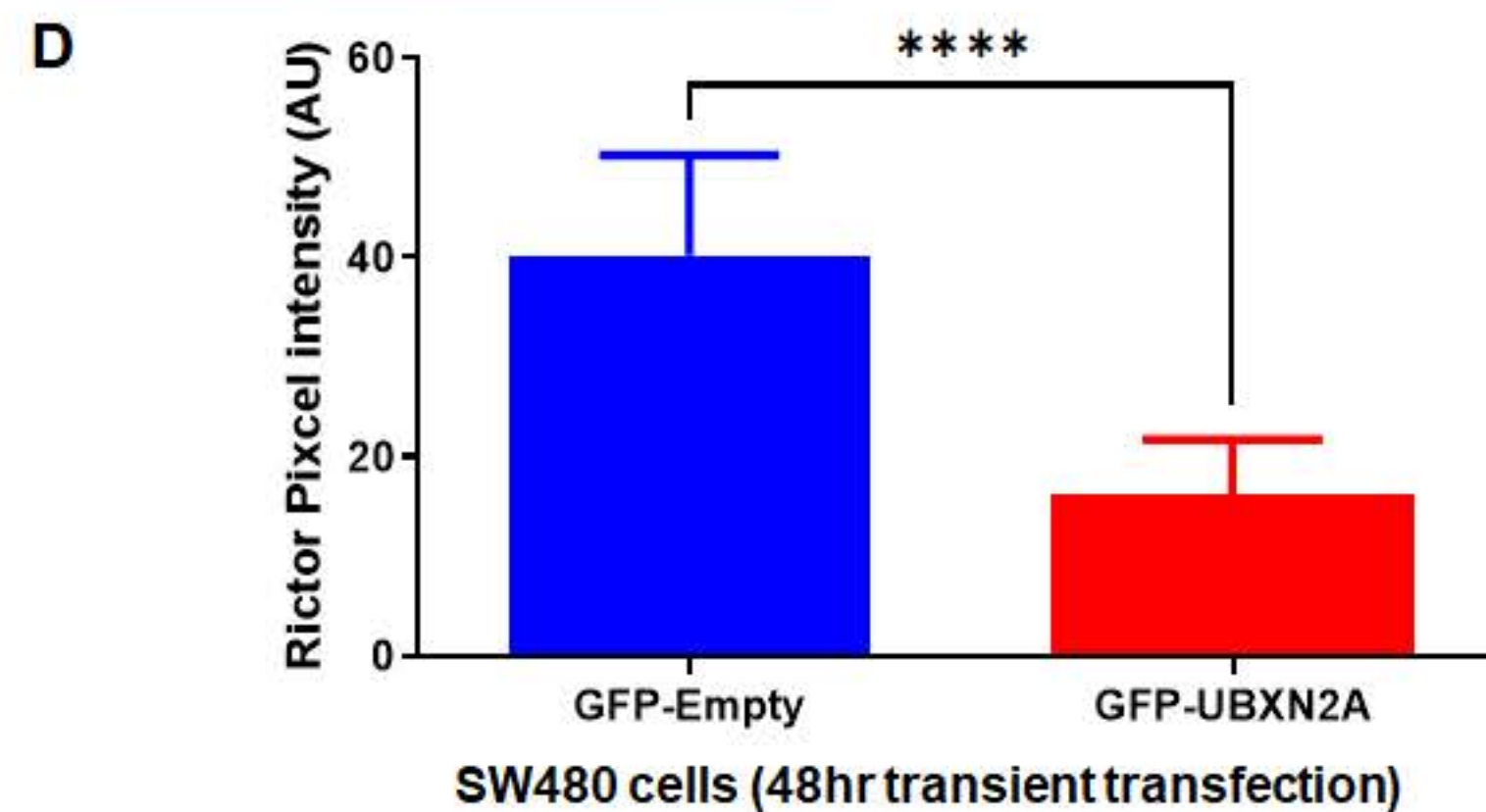
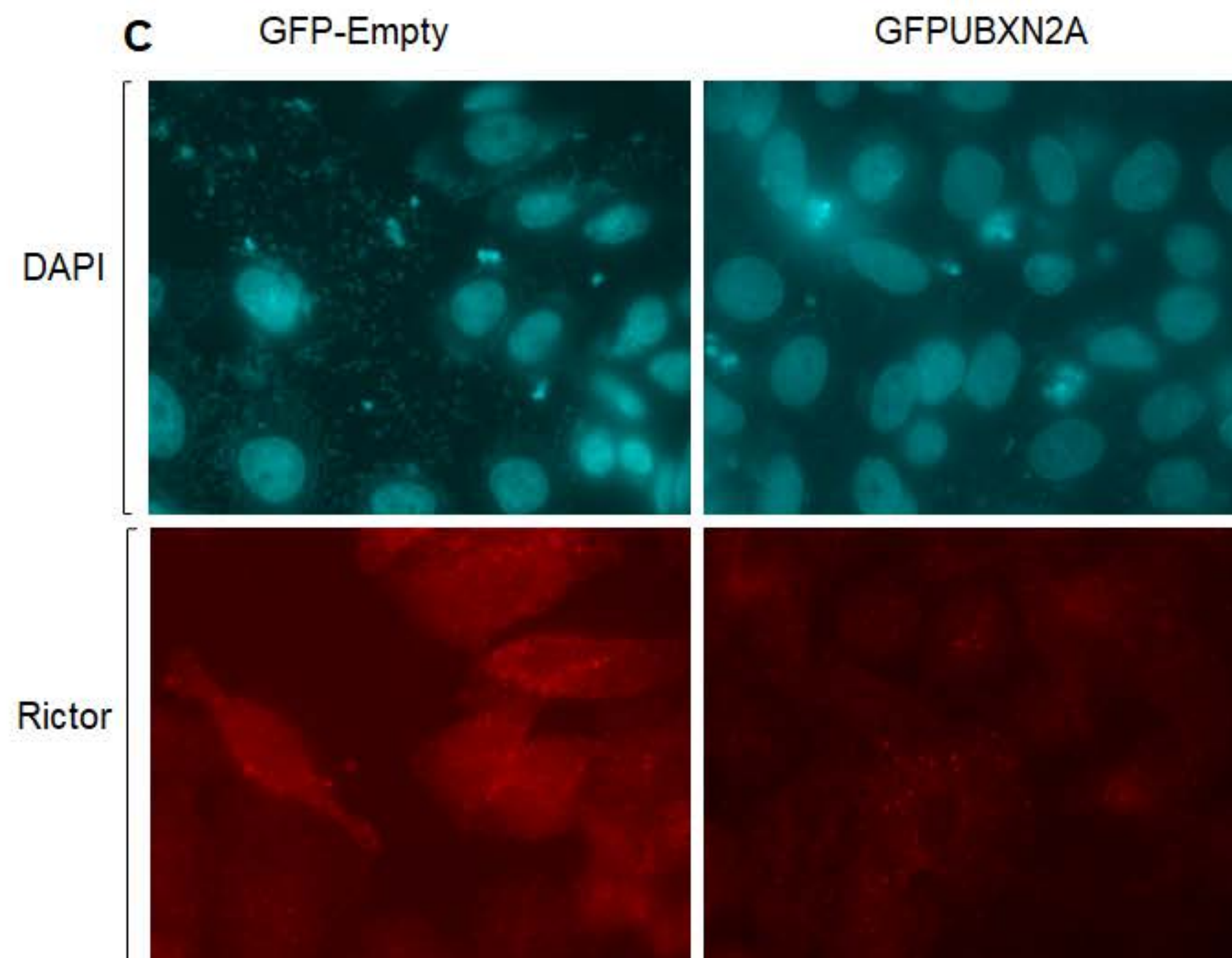


HCT-116-DOX induced for 72 hours



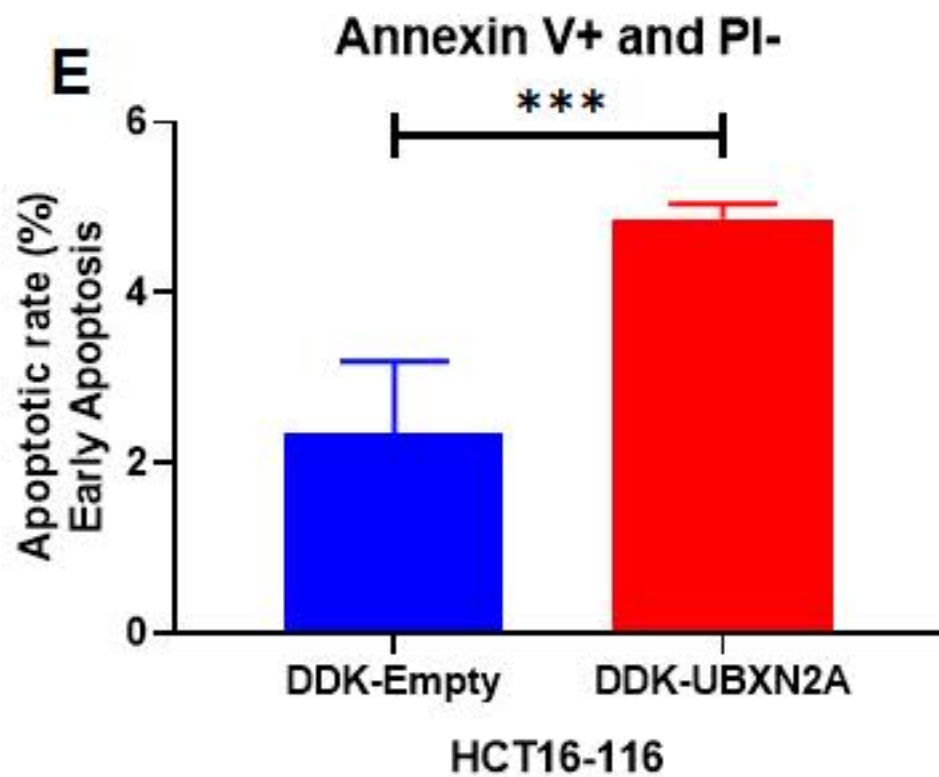
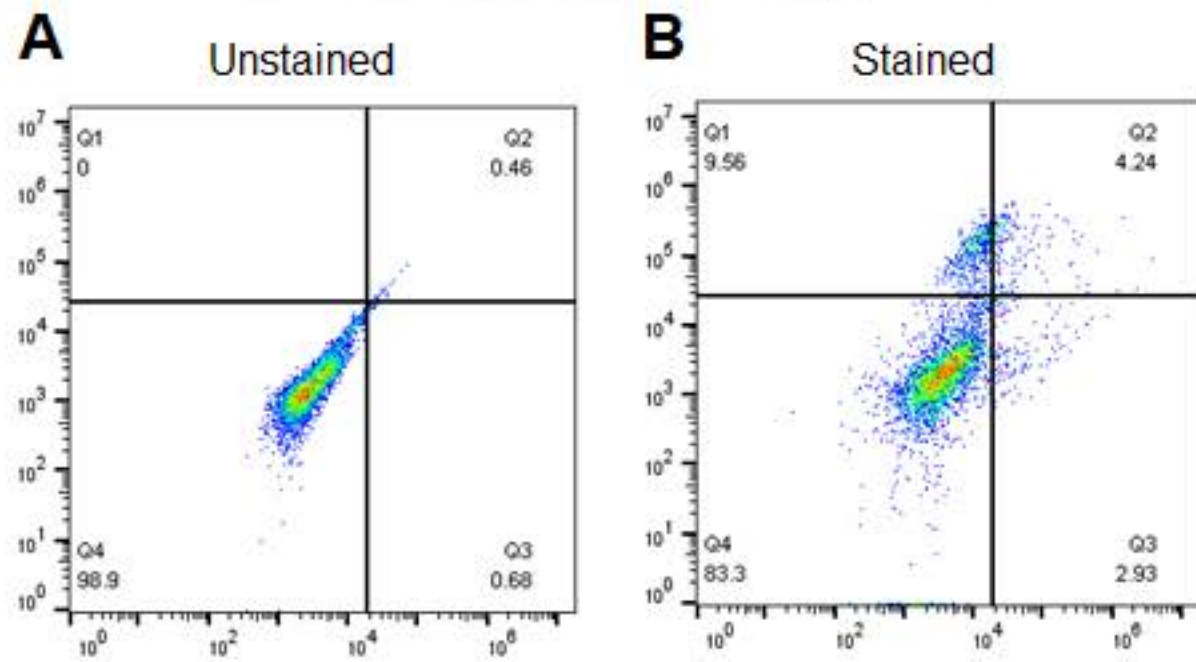
GFP-Empty

GFPUBXN2A

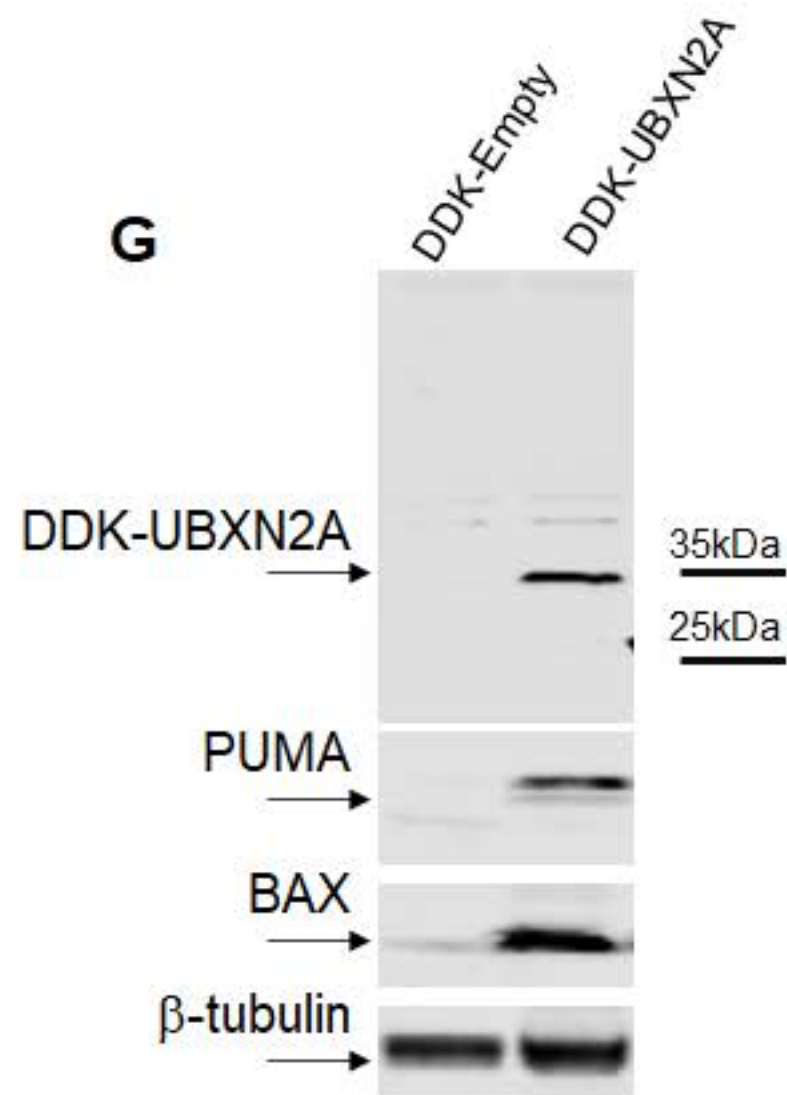
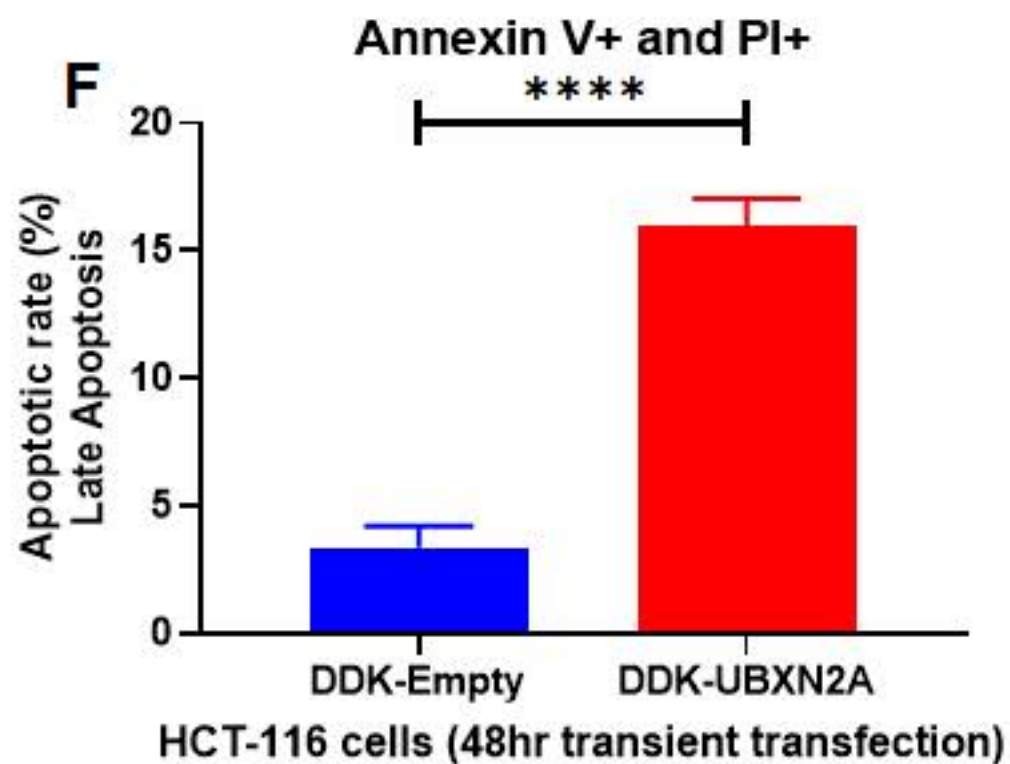
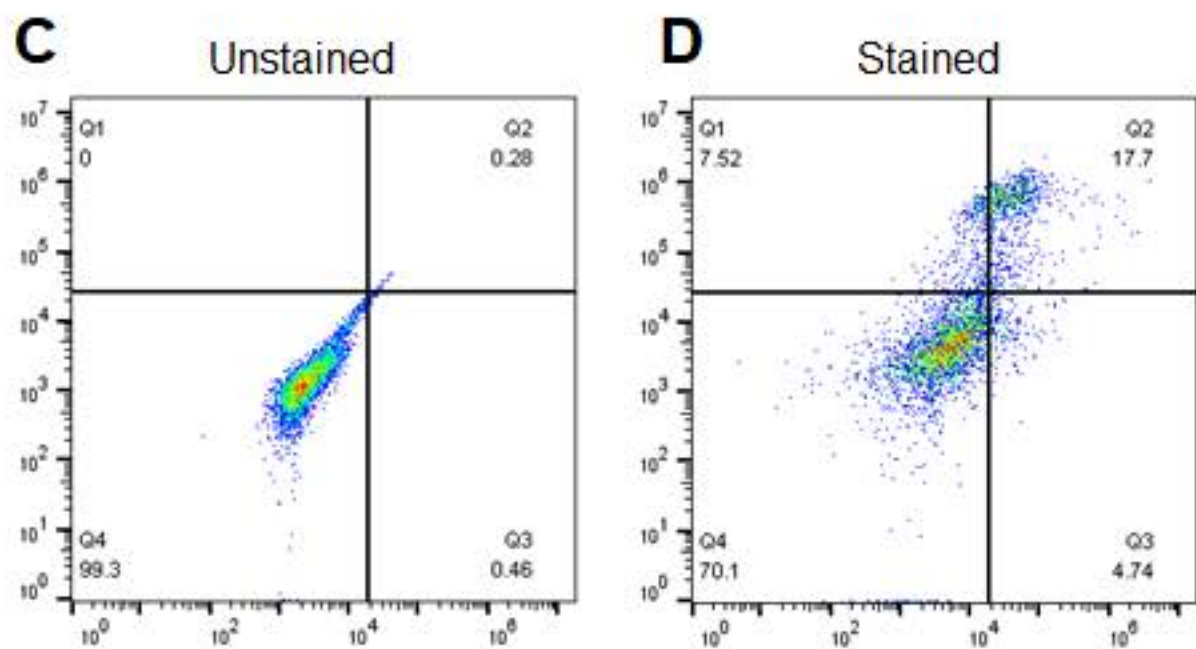


IP: Anti-Rictor polyclonal (Proteintech)
 IB:: Anti-Rictor Monoclonal (Sigma)-Panel E
 IB: Anti-UBXN2A polyclonal-panel F
 LC: Light chain

HCT-116 expressing DDK-Empty vector

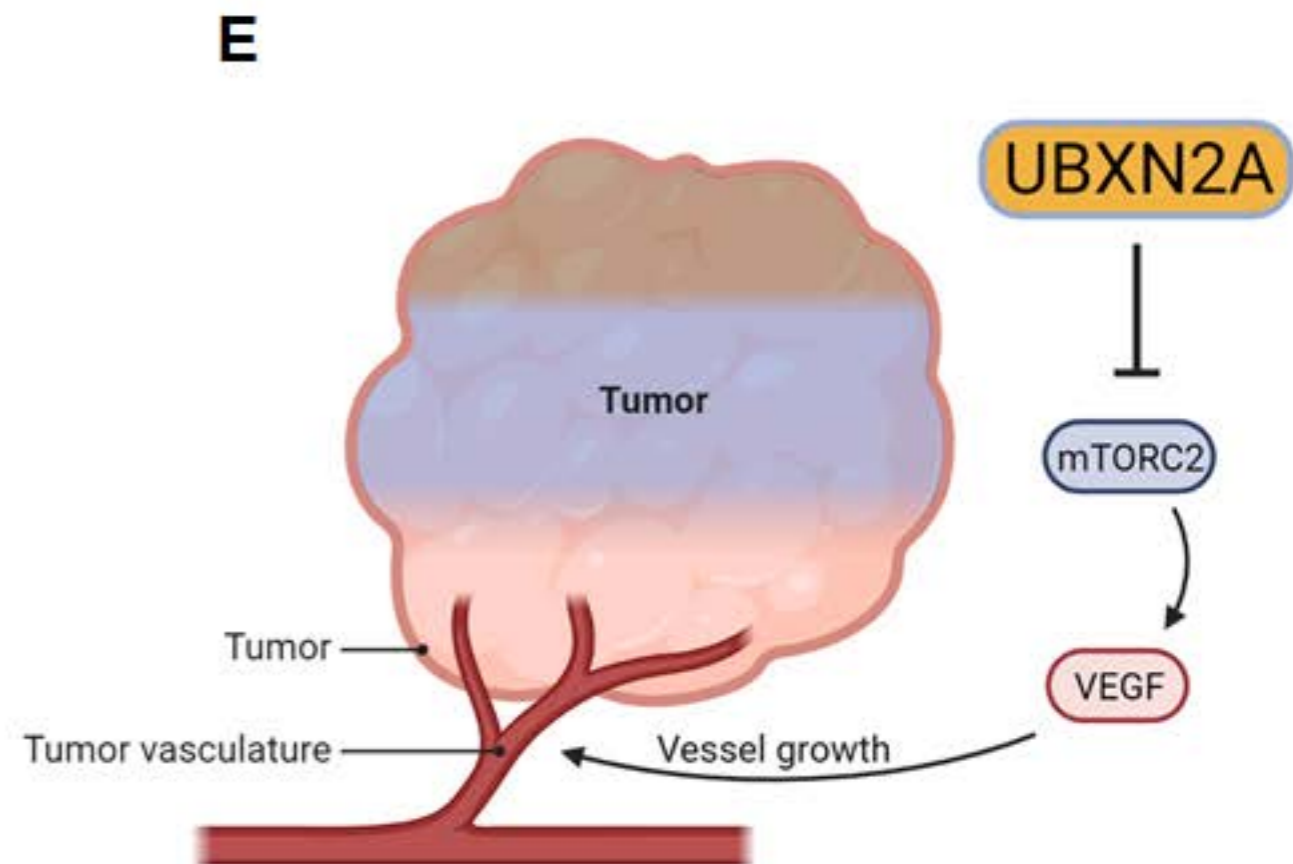
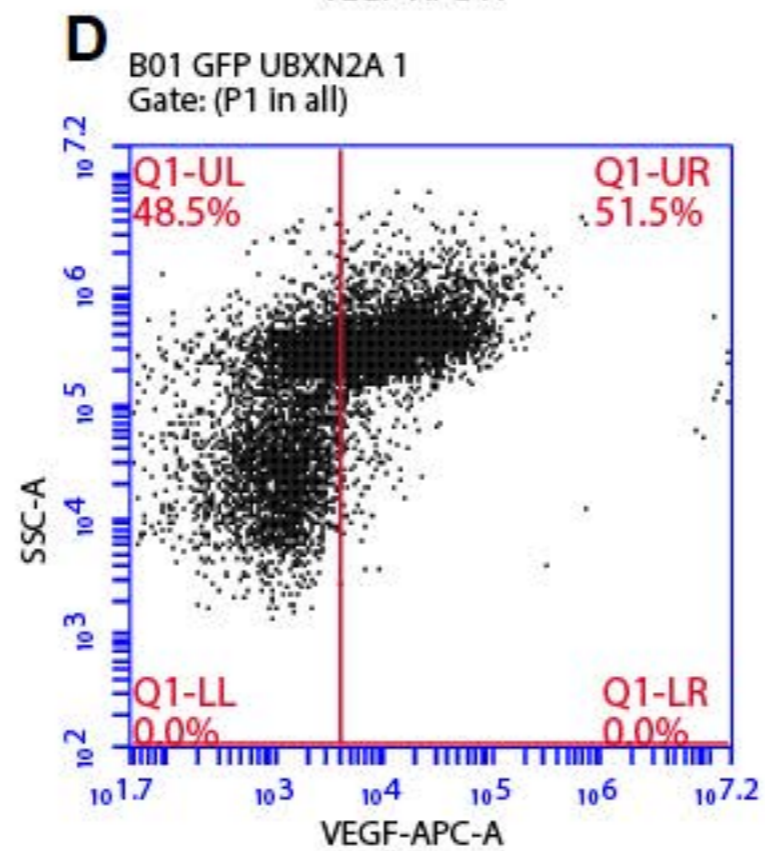
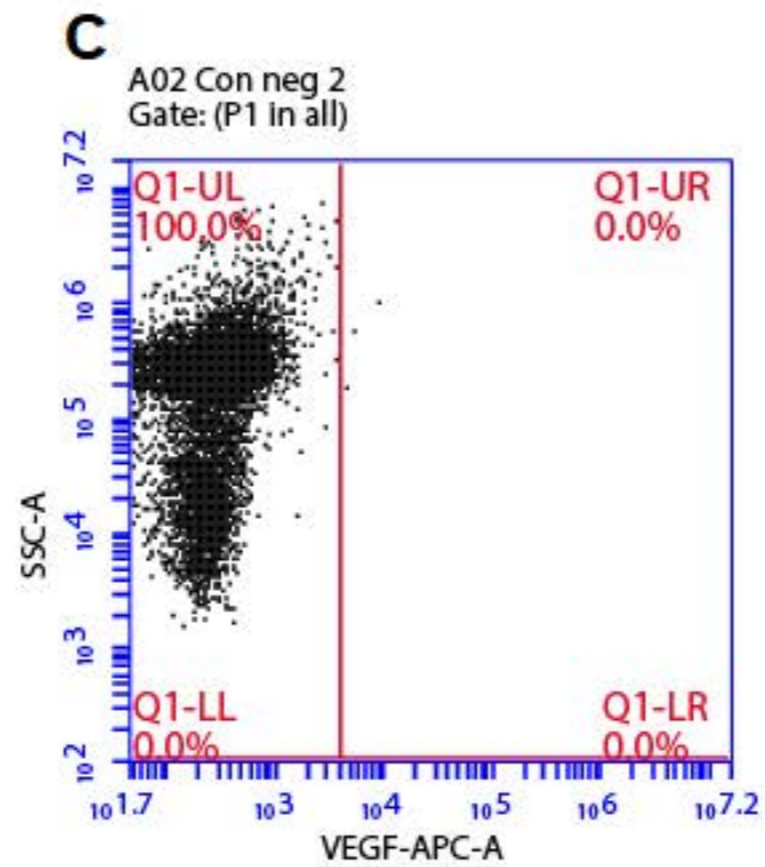
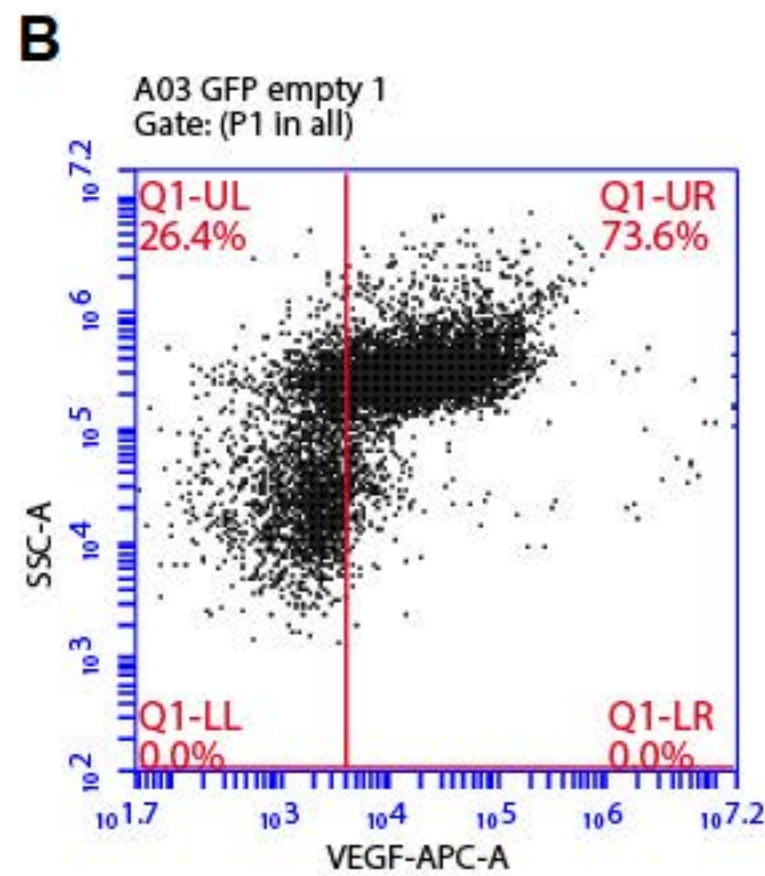
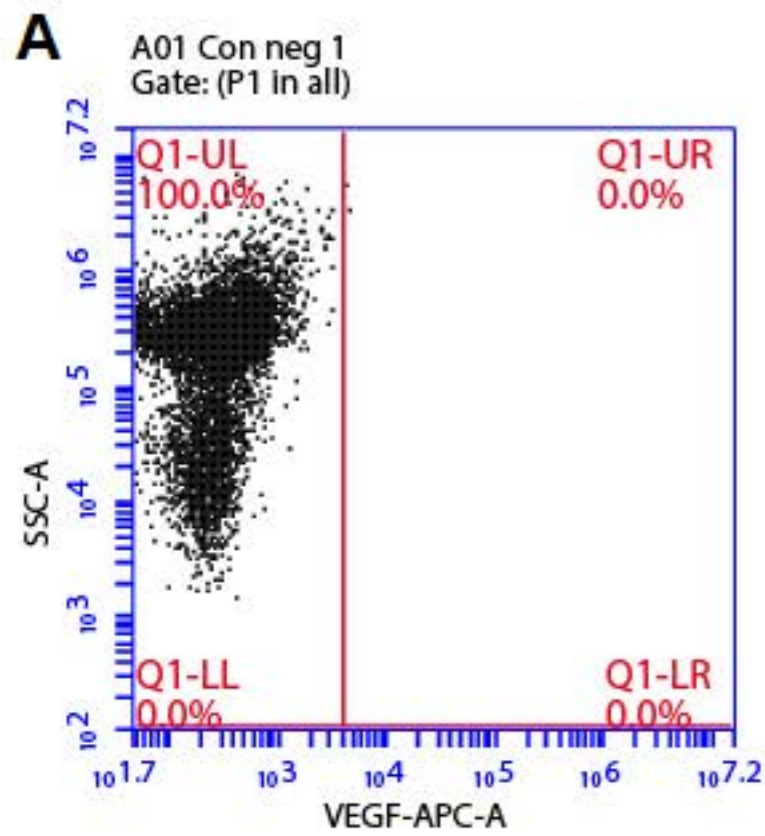


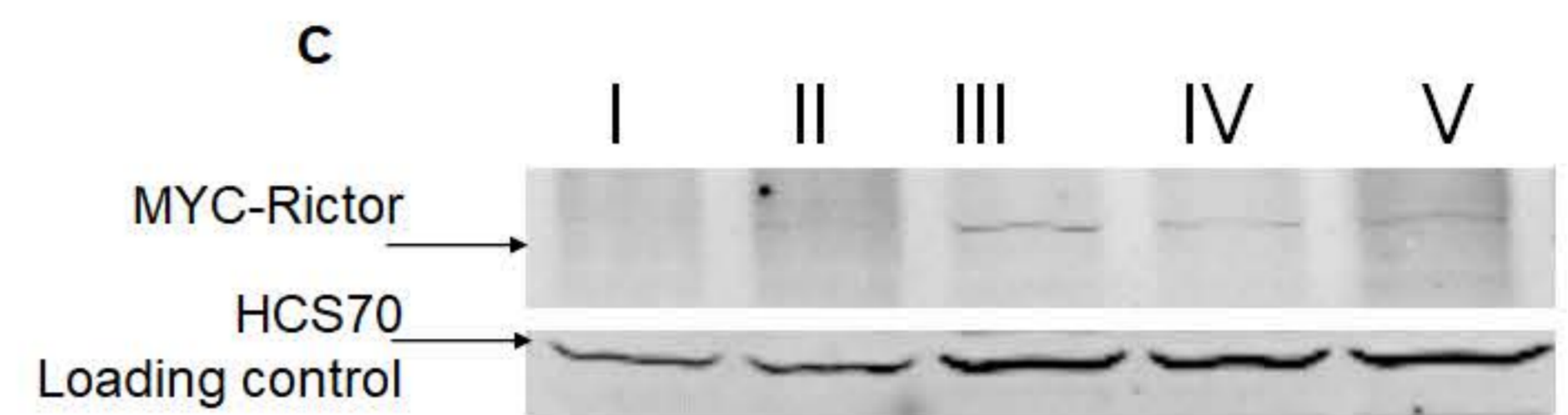
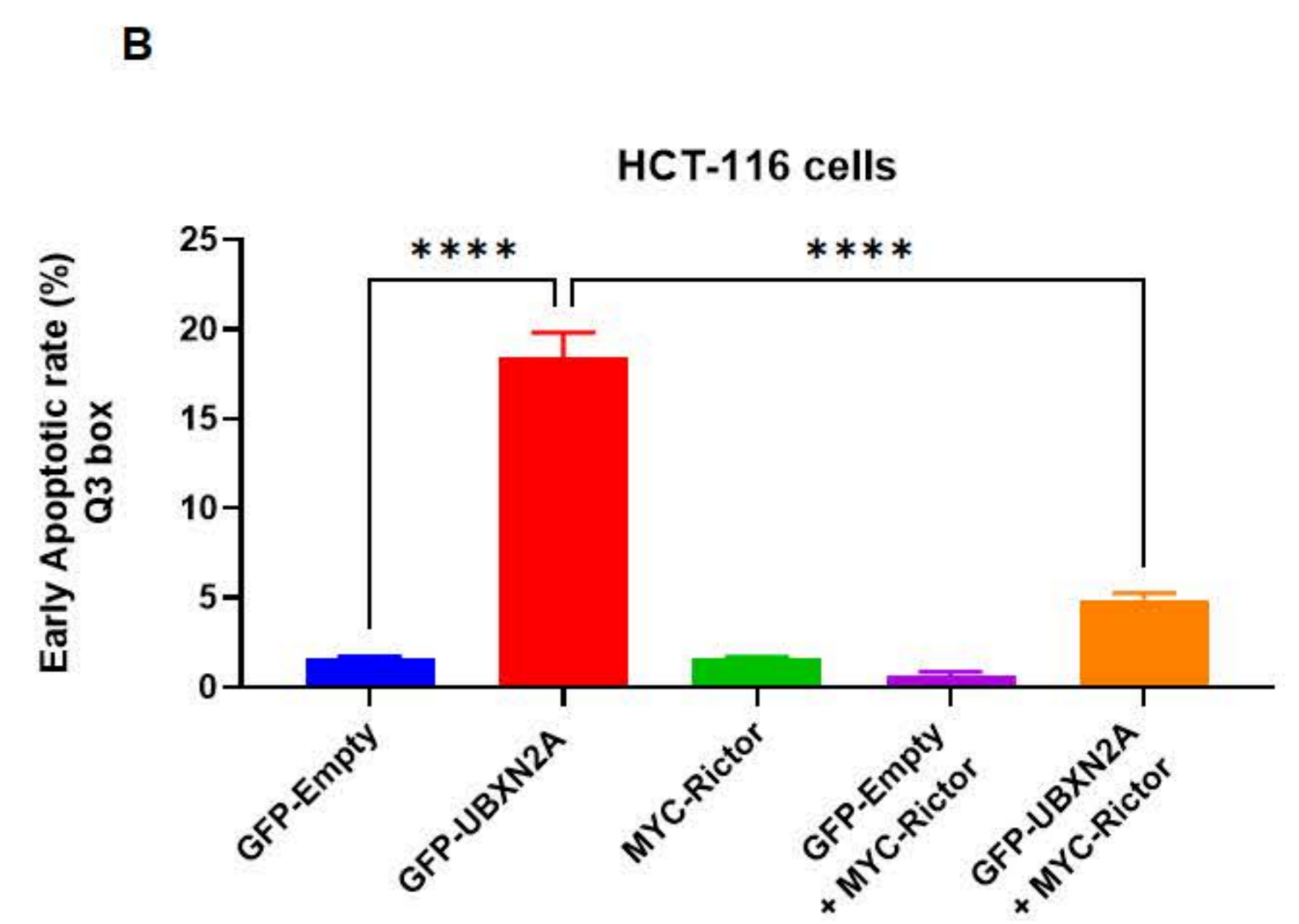
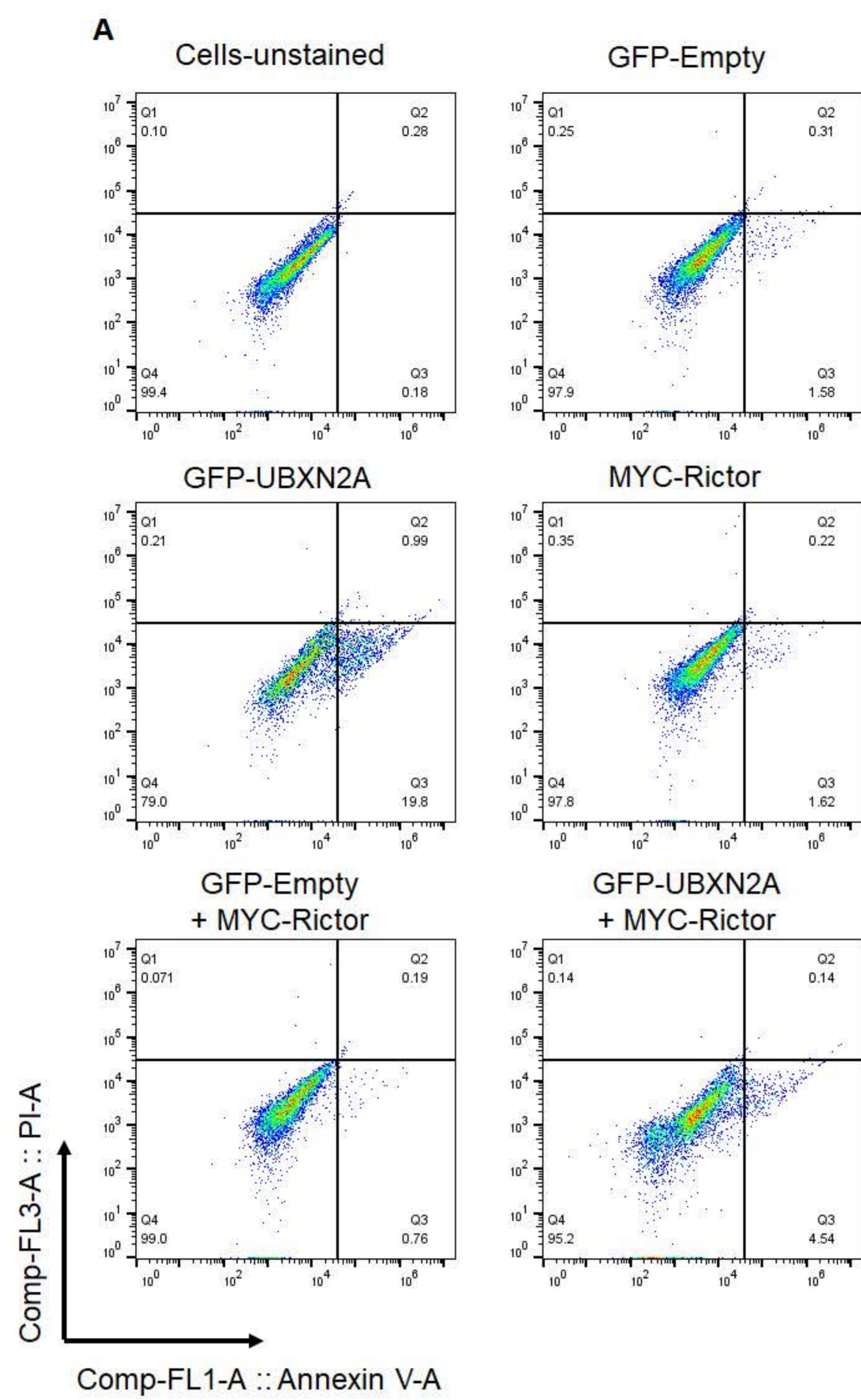
HCT-116 expressing DDK-UBXN2A vector



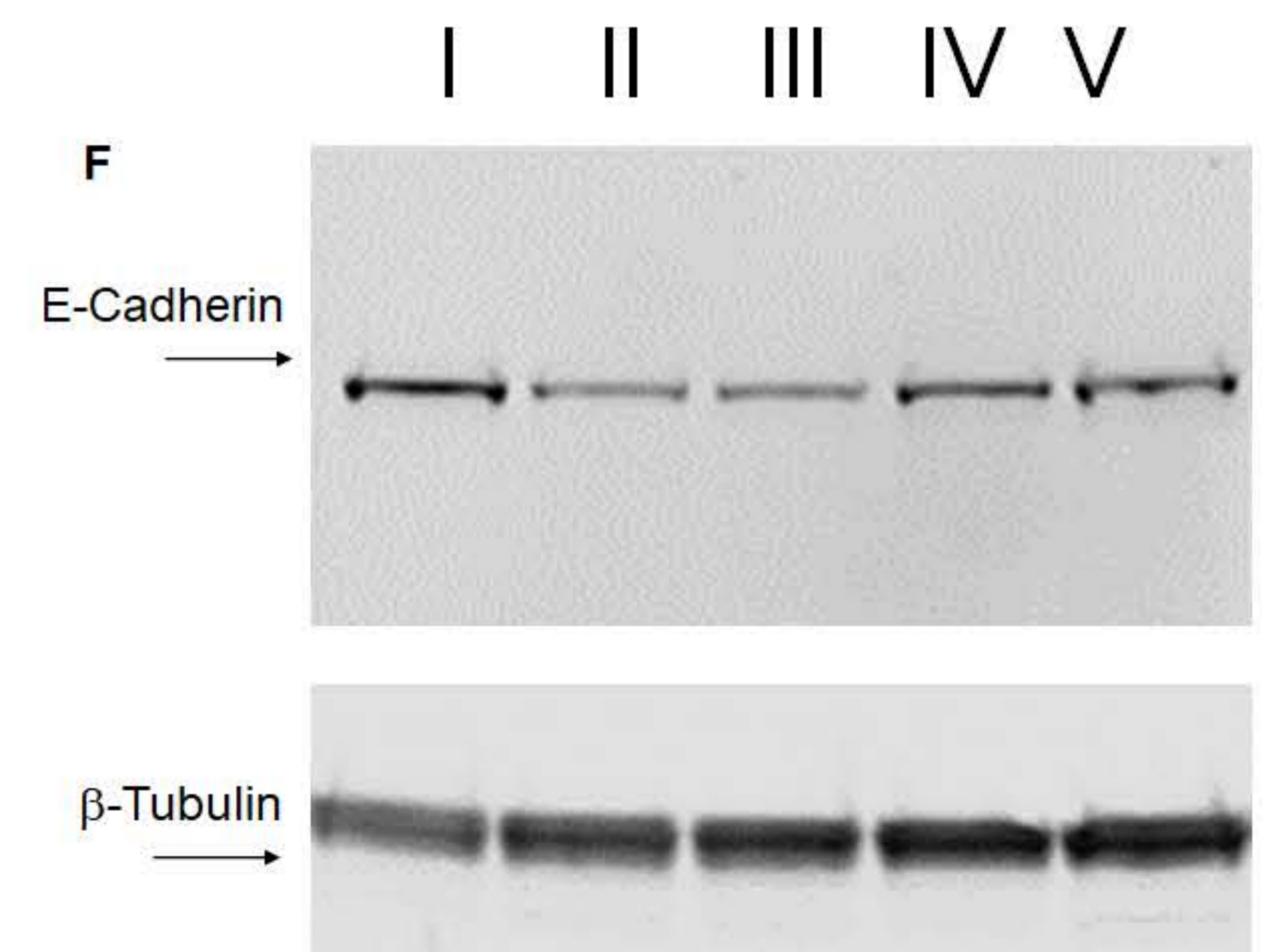
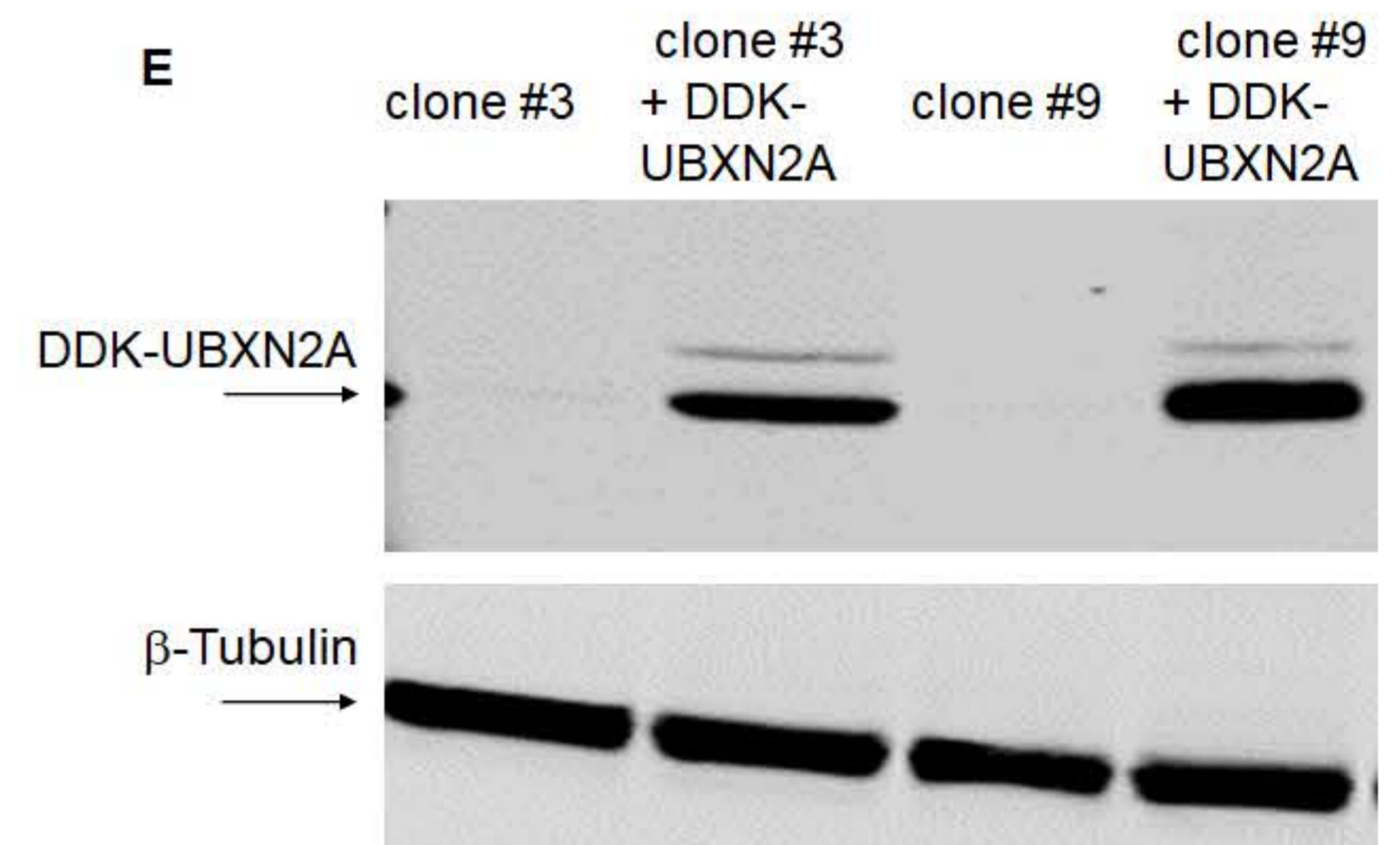
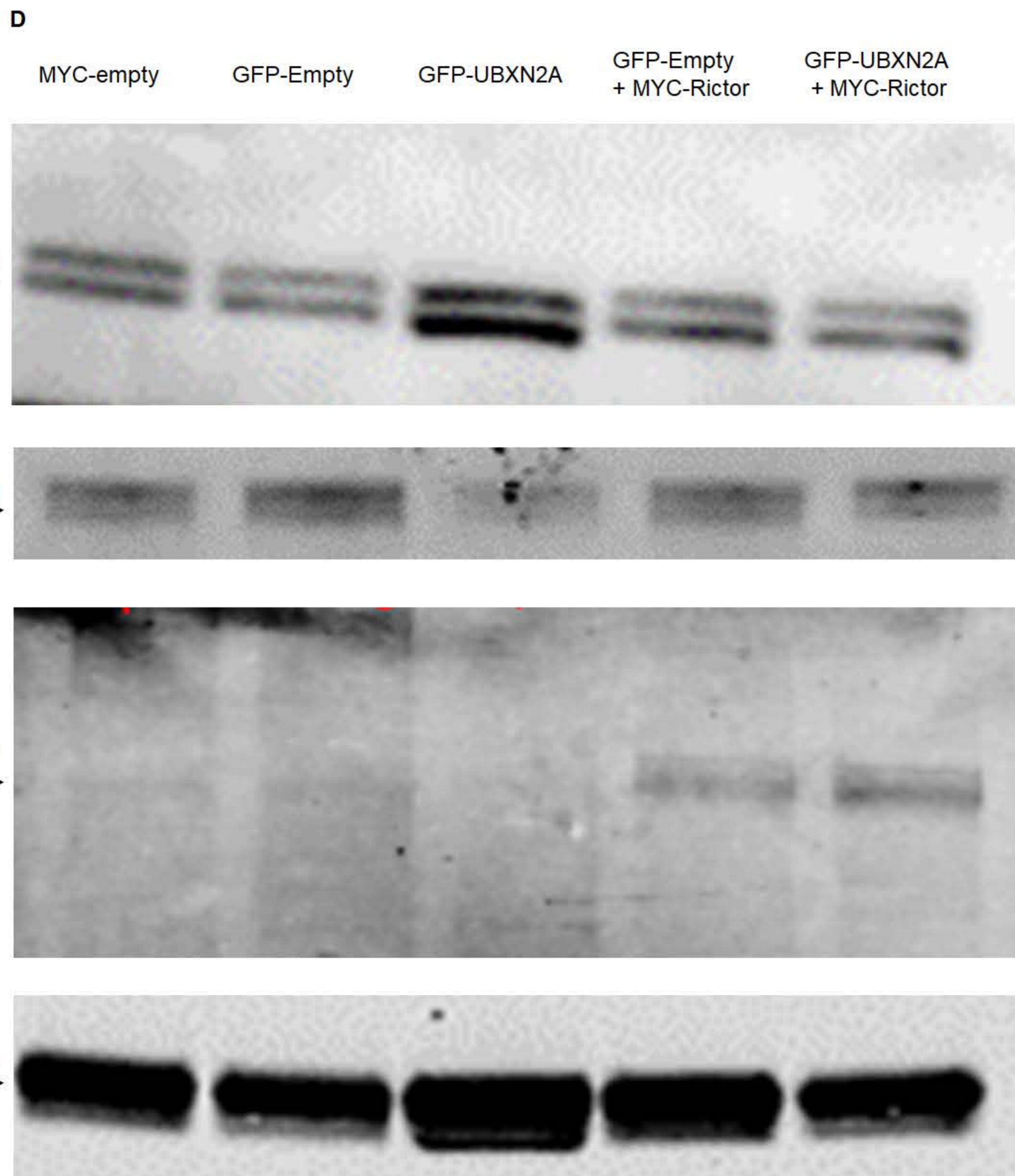
Comp-FL13-A:: PI-A

Comp-FL1-A:: FITC-Annexin V-A

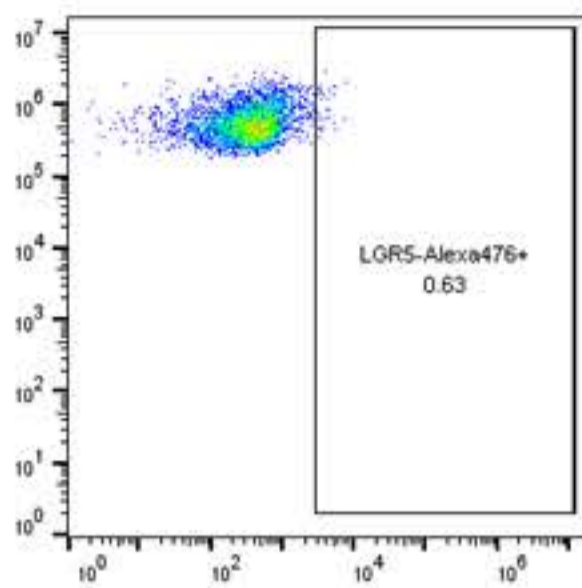
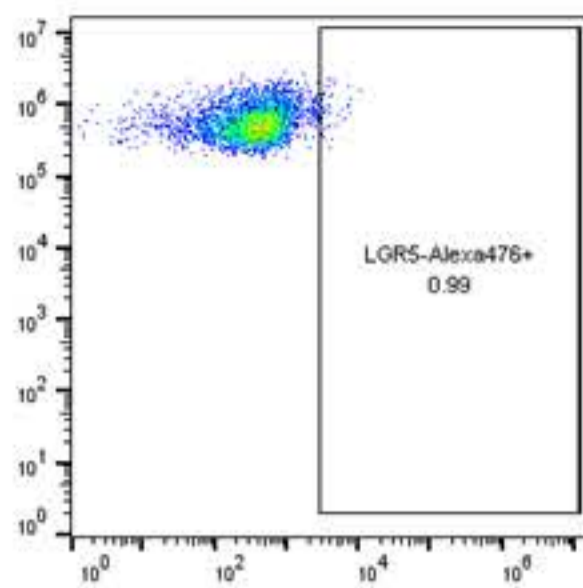
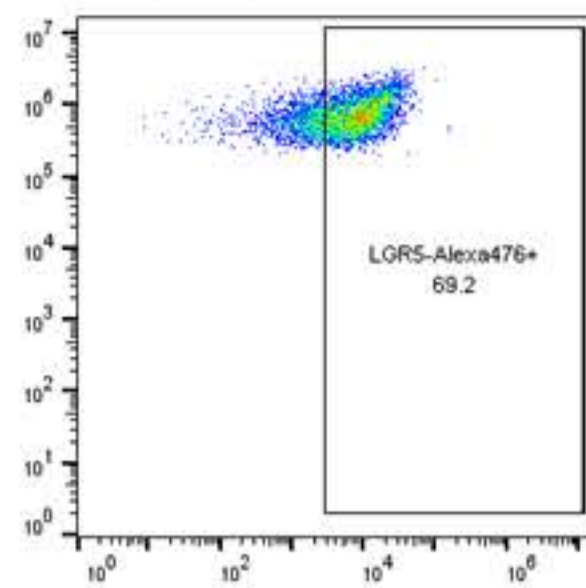
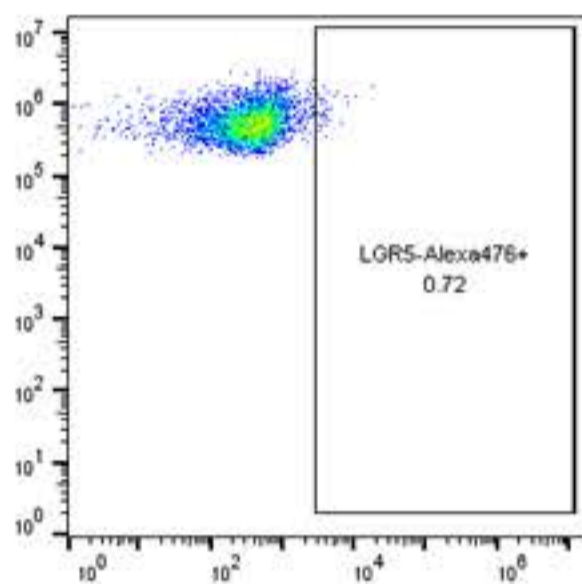
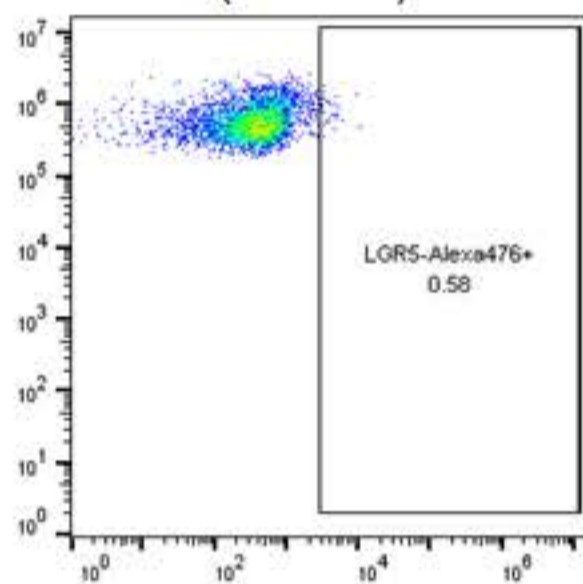
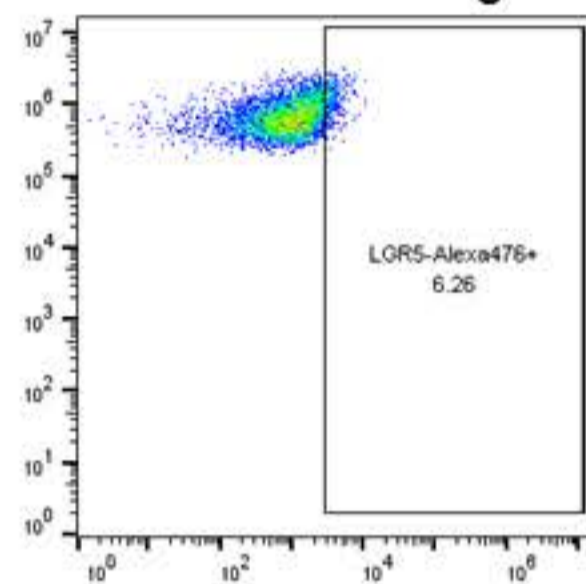




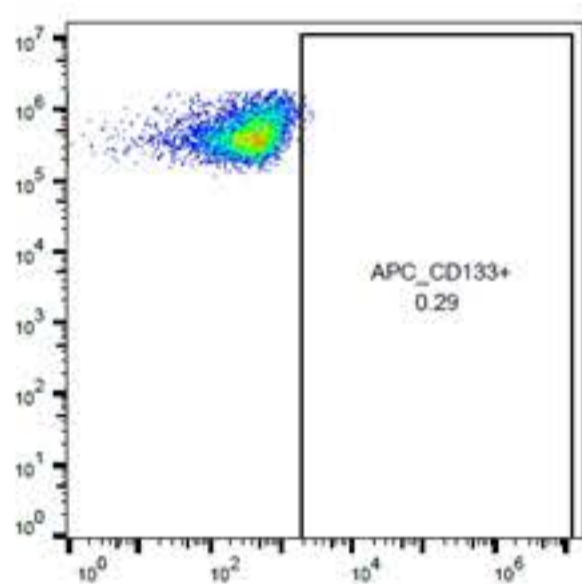
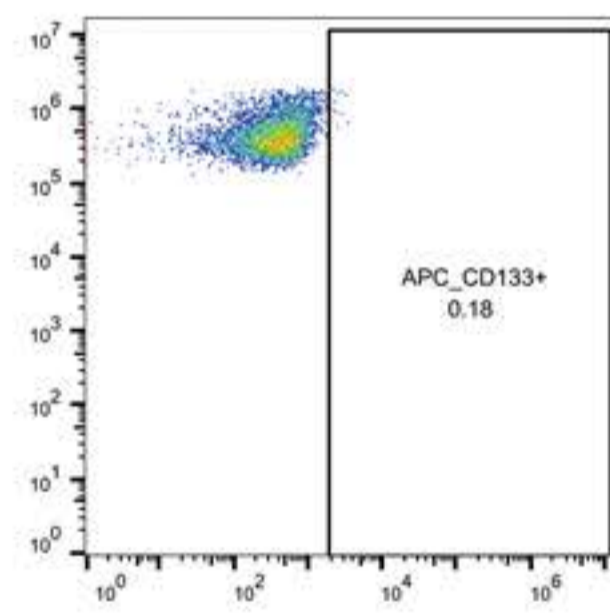
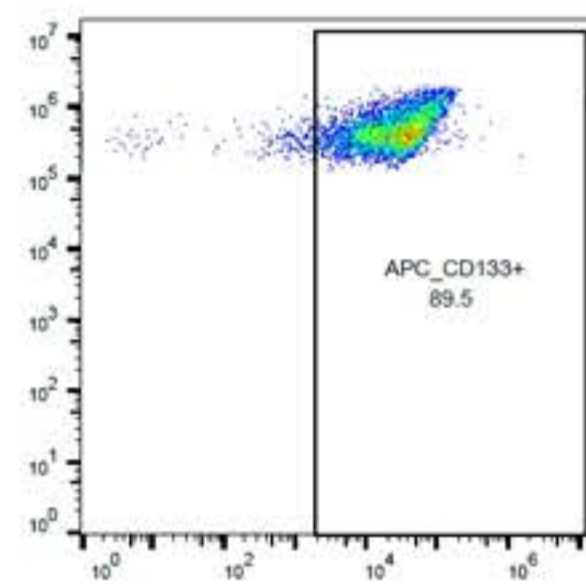
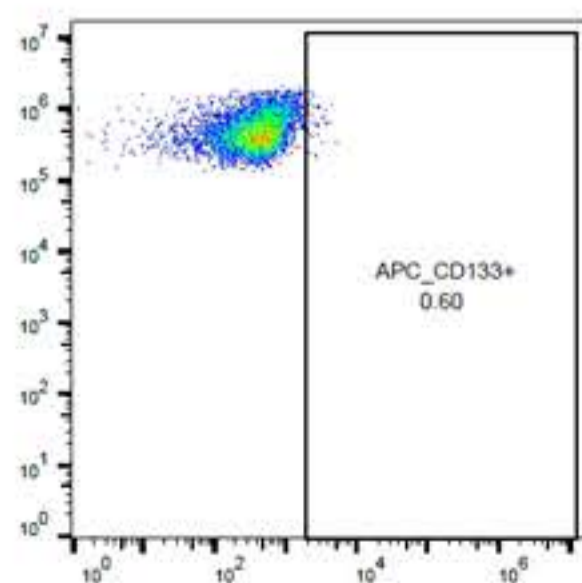
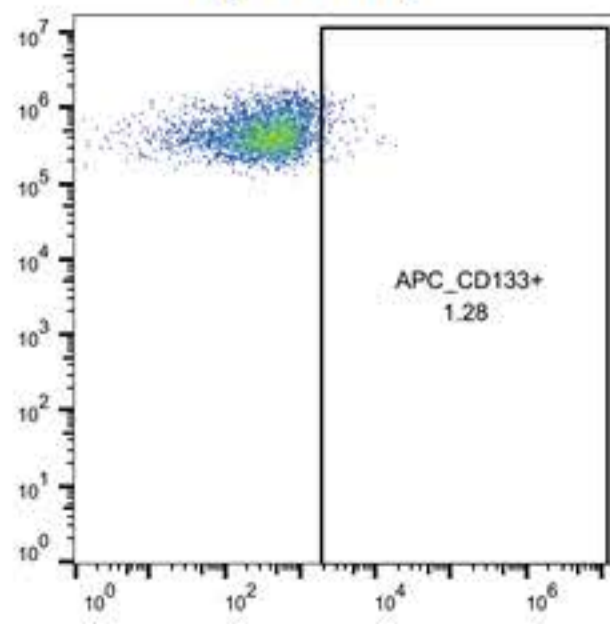
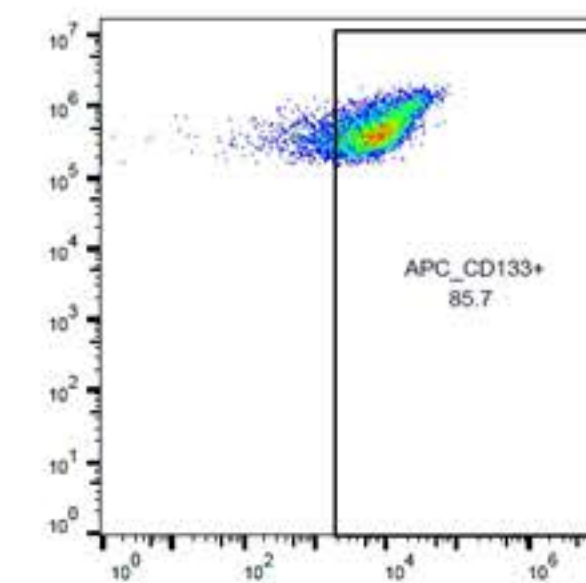
I: GFP-Empty
II: GFP-UBXN2A
III: MYC-Rictor
IV: GFP-Empty + MYC-Rictor
V: GFP-UBXN2A + MYC-Rictor



I: WT cells
II: Clone #3 UBXN2A KO
III: Clone #9 UBXN2A KO
IV: Clone #3 UBXN2A KO plus DDK-UBXN2A
V: Clone #9 UBXN2A KO plus DDK-UBXN2A

ADDK-Empty-unstained
(Control)**B**DDK-Empty
Alexa fluor 647 Rat IgG2b, κ Isotype
(Control)**C**DDK-Empty
Alexa Fluor 647
Rat Anti-Human Lgr5**D**DDK-UBXN2A-unstained
(Control)**E**DDK-UBXN2A
Alexa fluor 647 Rat IgG2b, κ Isotype
(Control)**F**DDK-UBXN2A
Alexa Fluor 647
Rat Anti-Human Lgr5

Como-FL4-A::LGR5-Alexa476-A

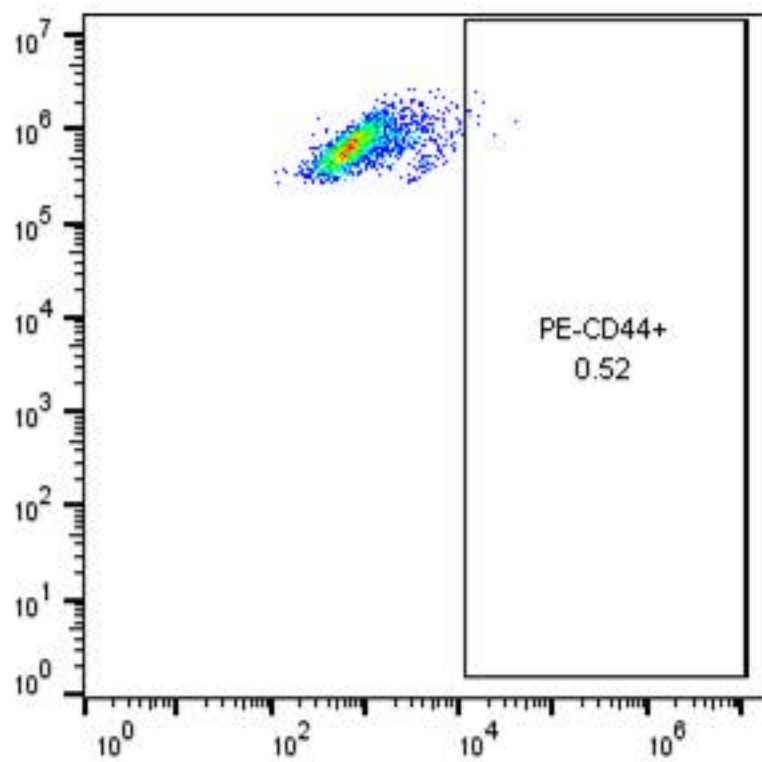
GDDK-Empty-unstained
(Control)**H**DDK-Empty
APC Mouse IgG1 κ Isotype
(Control)**I**DDK-Empty
APC Mouse Anti-Human CD133
Clone W6B3C1**J**DDK-UBXN2A-unstained
(Control)**K**DDK-UBXN2A
APC Mouse IgG1 κ Isotype
(Control)**L**DDK-UBXN2A
APC Mouse Anti-Human CD133
Clone W6B3C1

FL4-A :: CD133-APC-A

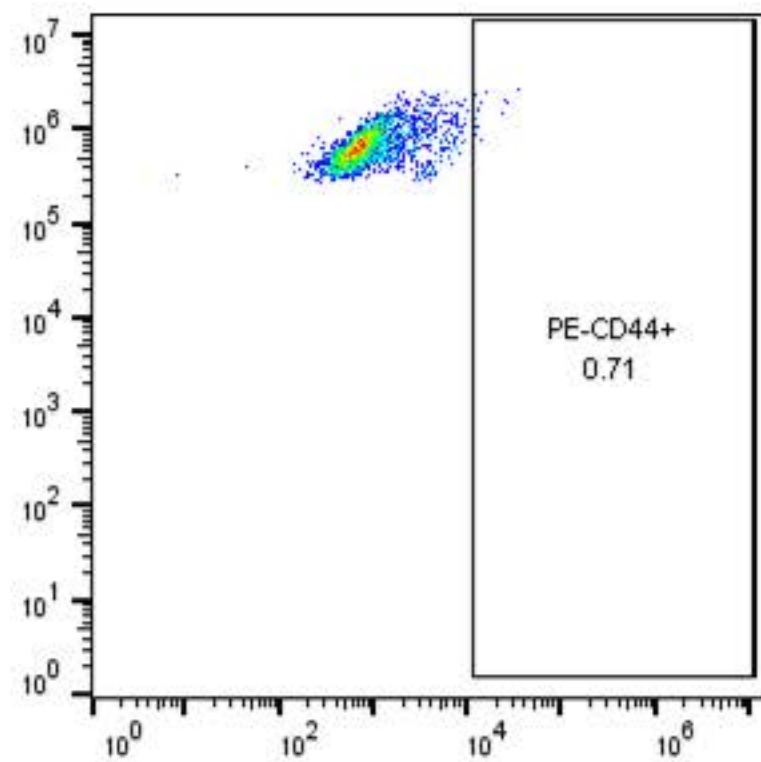
SSC-A :: SSC-A

SSC-A :: SSC-A

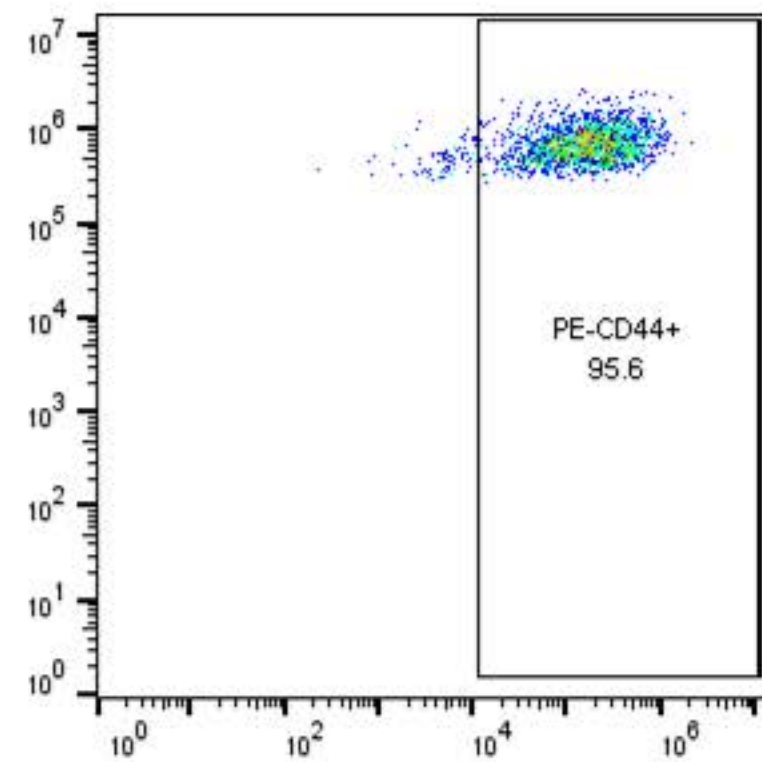
A DDK-Empty-unstained
Control



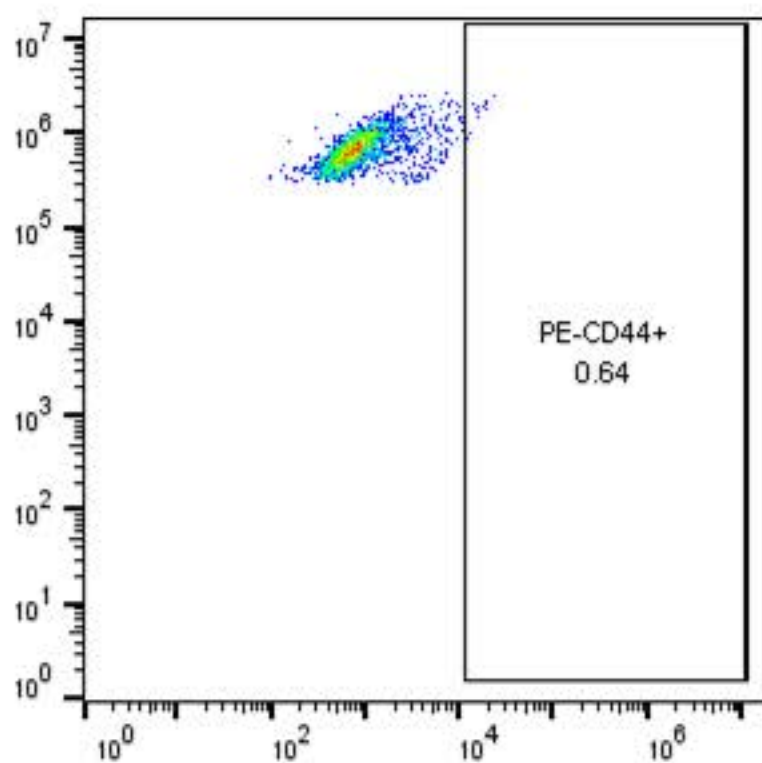
B DDK-Empty
PE Mouse IgG2b κ Isotype
Control



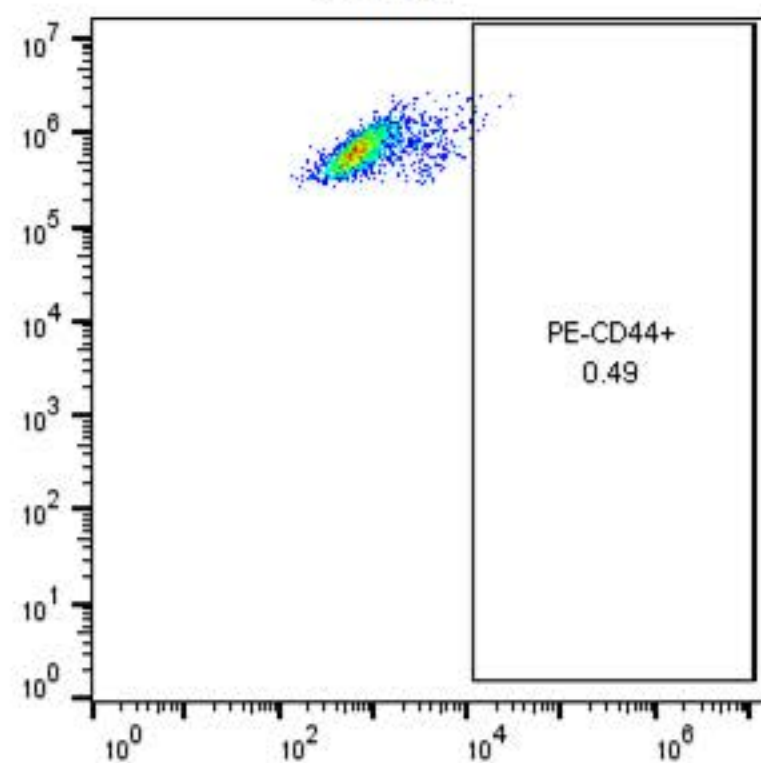
C DDK-Empty
PE Mouse Anti-Human CD44
Clone G44-26



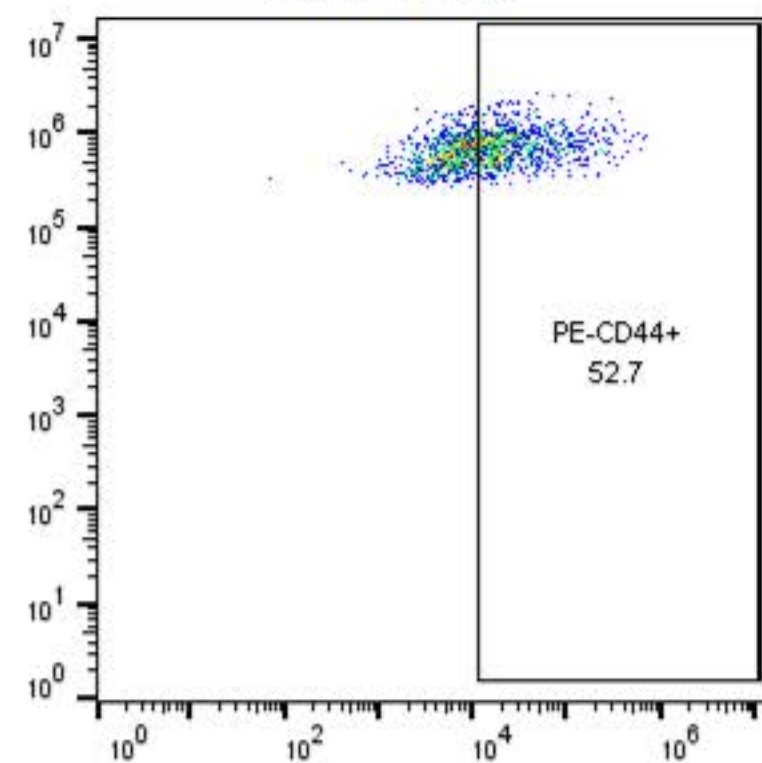
D DDK-UBXN2A-unstained
Control



E DDK-UBXN2A
PE Mouse IgG2b κ Isotype
Control

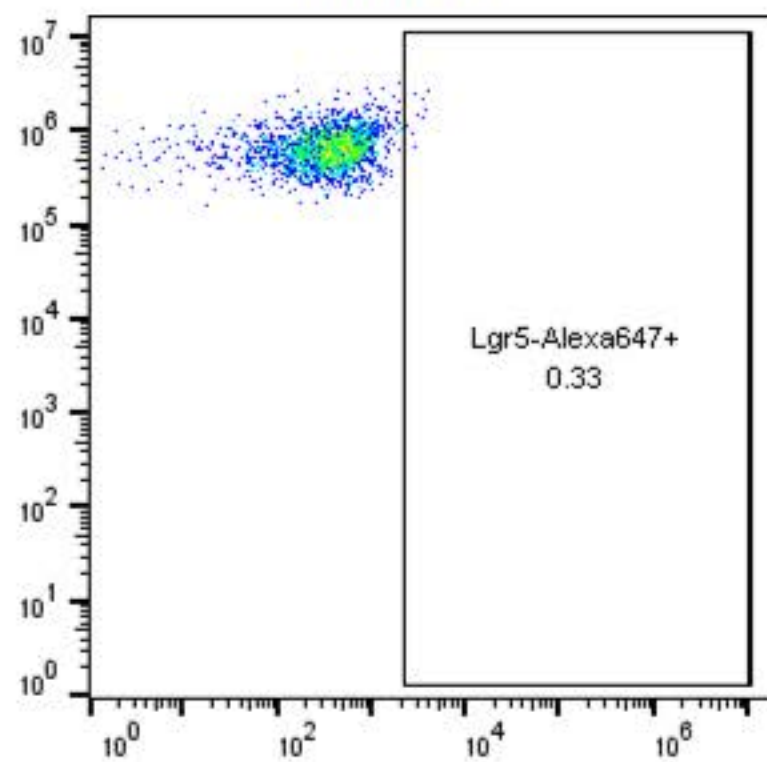


F DDK-UBXN2A
PE Mouse Anti-Human CD44
Clone G44-26

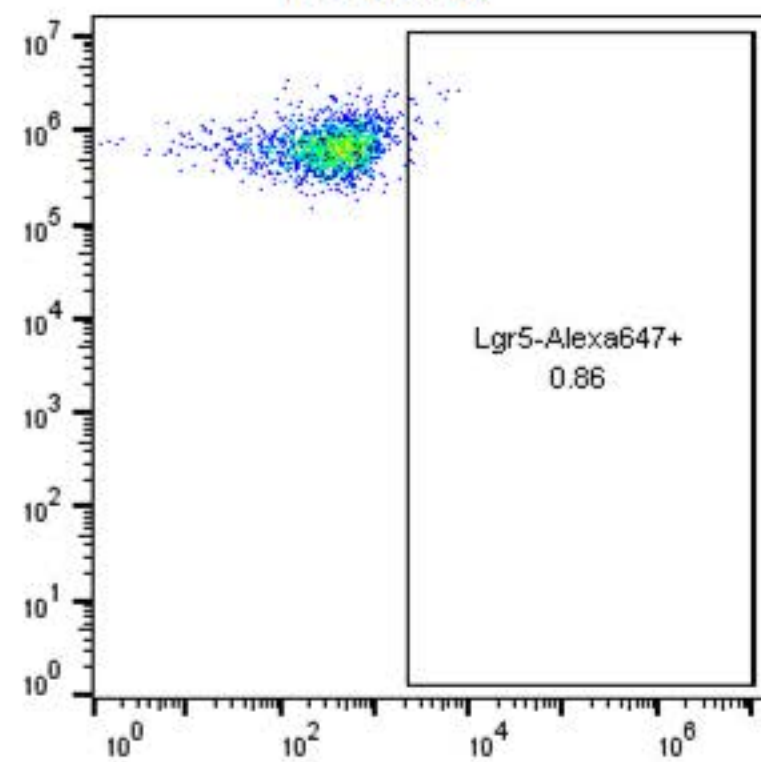


Como-FL2-A::PE-CD44-A

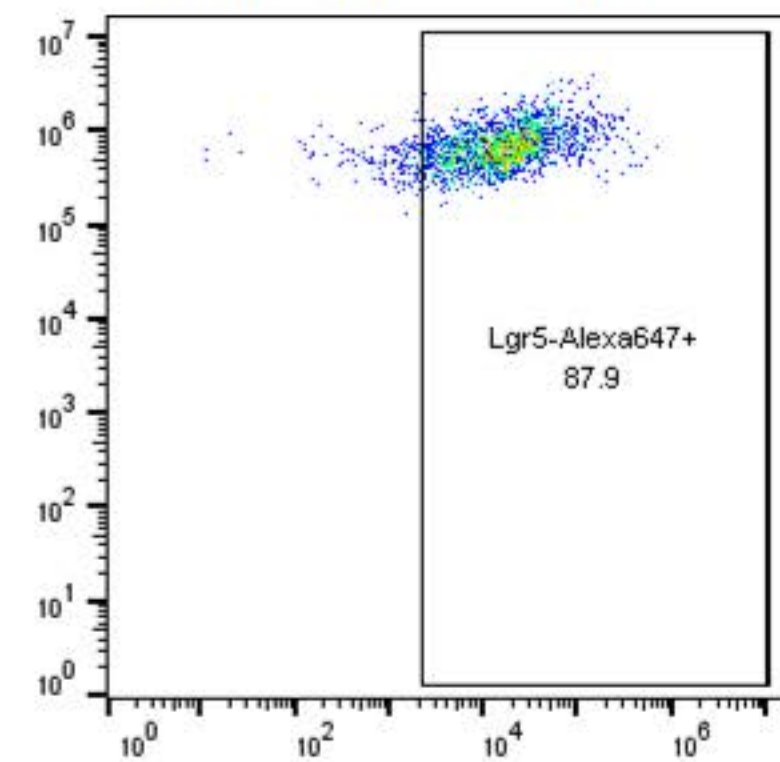
A DDK-Empty-unstained
(Control)



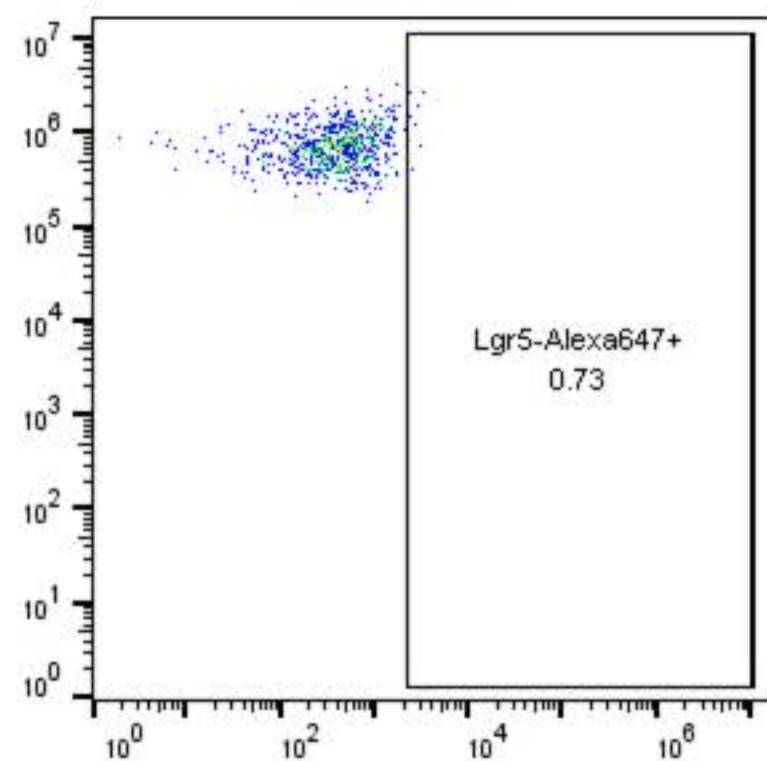
B DDK-Empty
Alexa fluor 647 Rat IgG2b, κ Isotype
(Control)



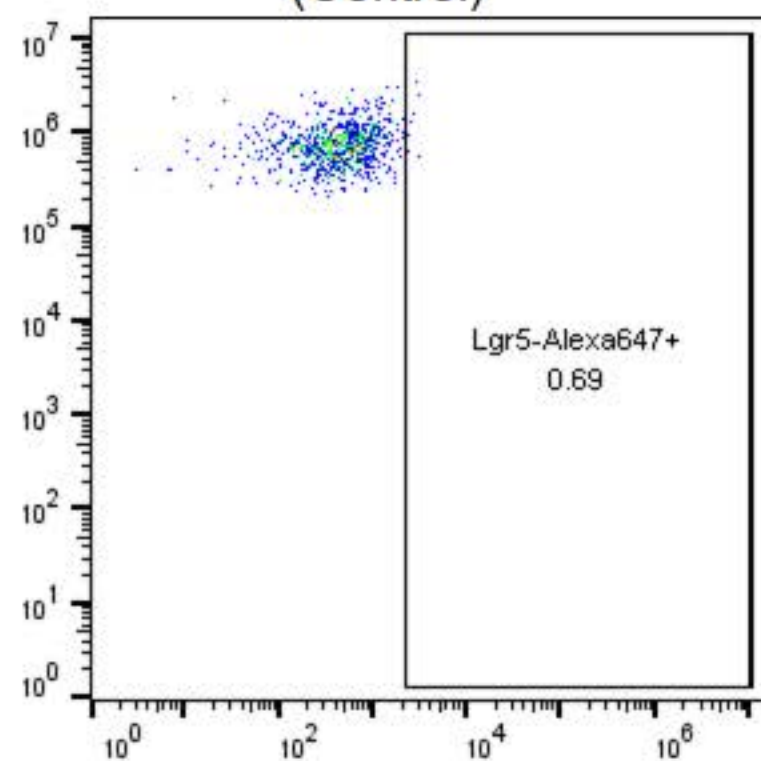
C DDK-Empty
Alexa Fluor 647
Rat Anti-Human Lgr5



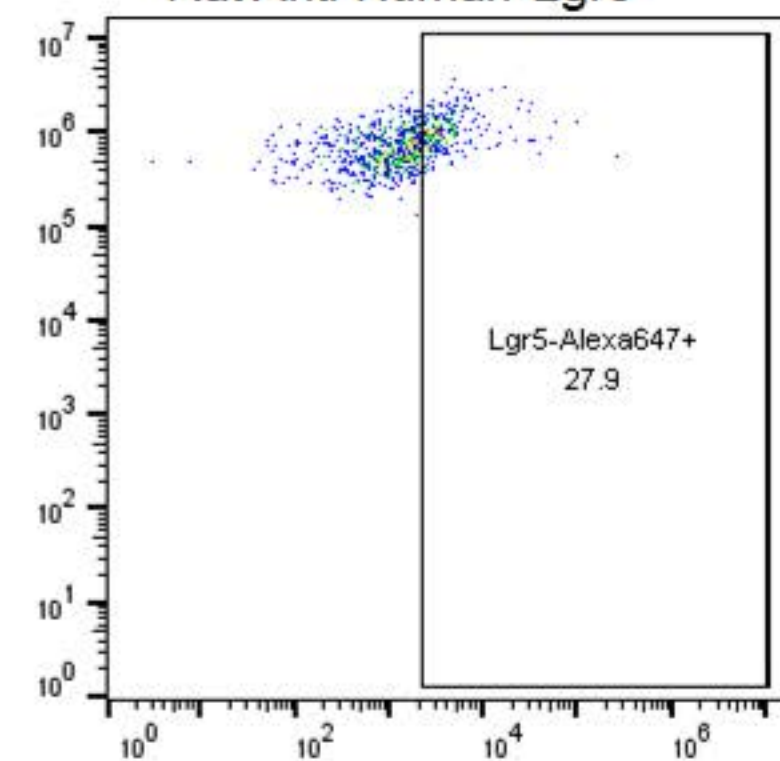
D DDK-UBXN2A-unstained
(Control)



E DDK-UBXN2A
Alexa fluor 647 Rat IgG2b, κ Isotype
(Control)

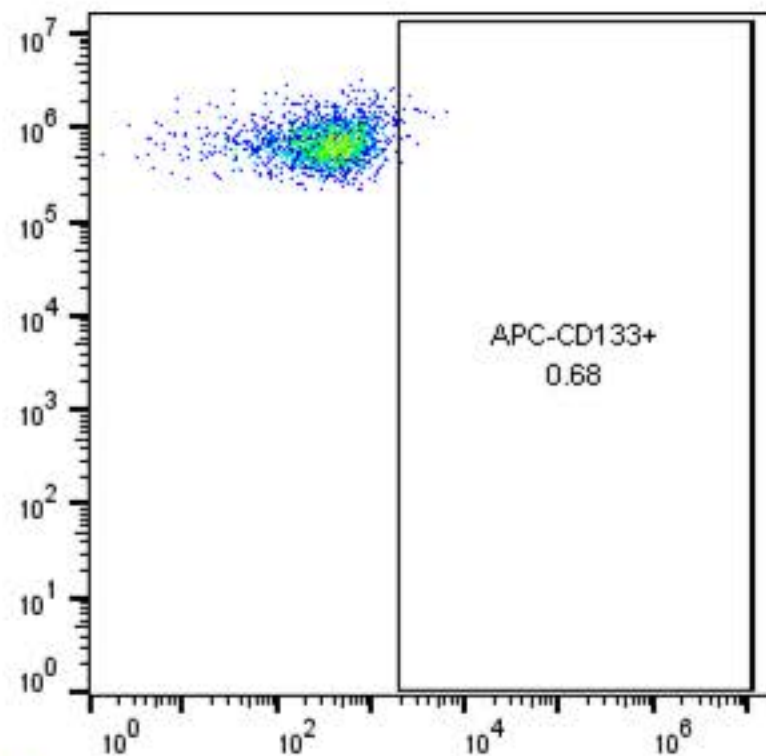
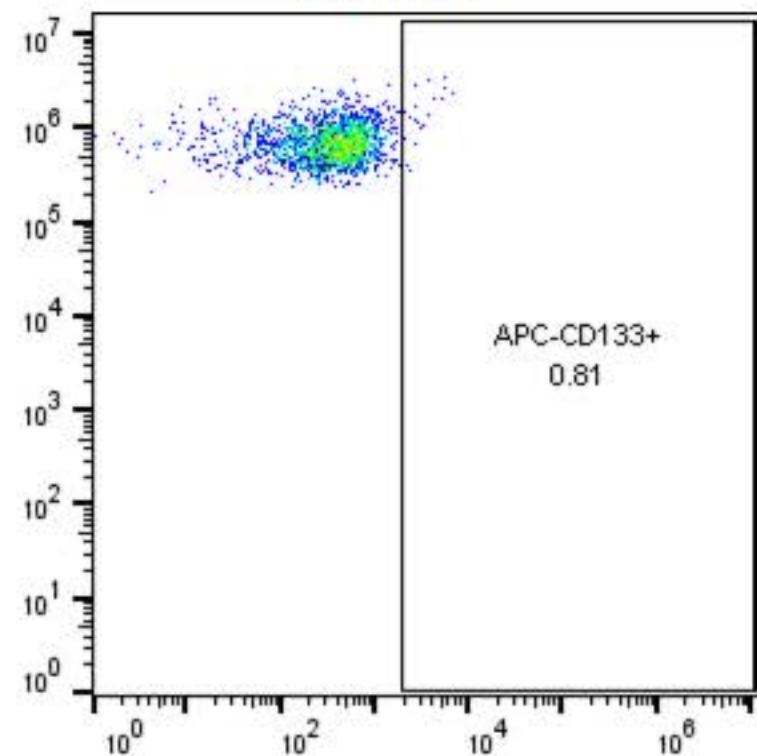
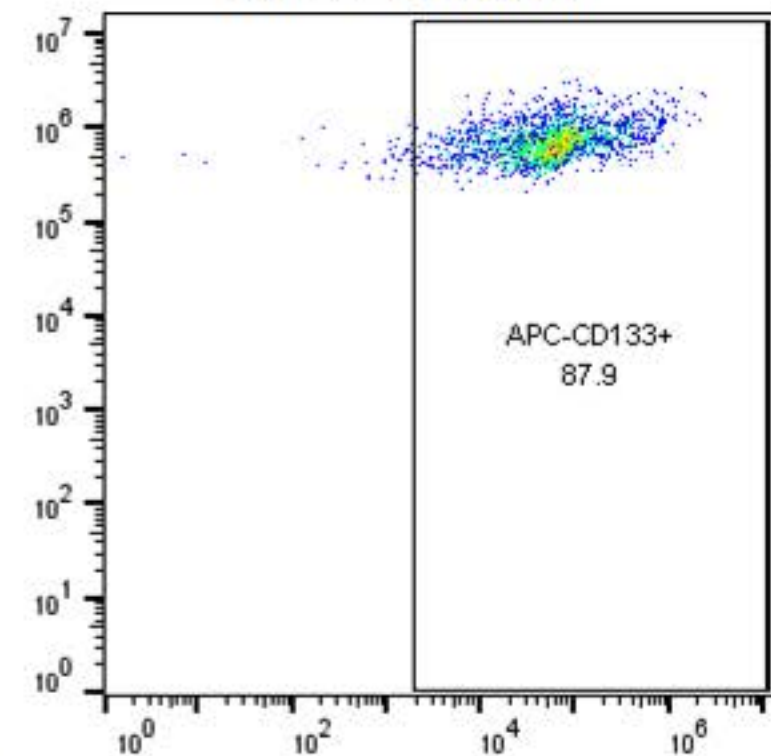
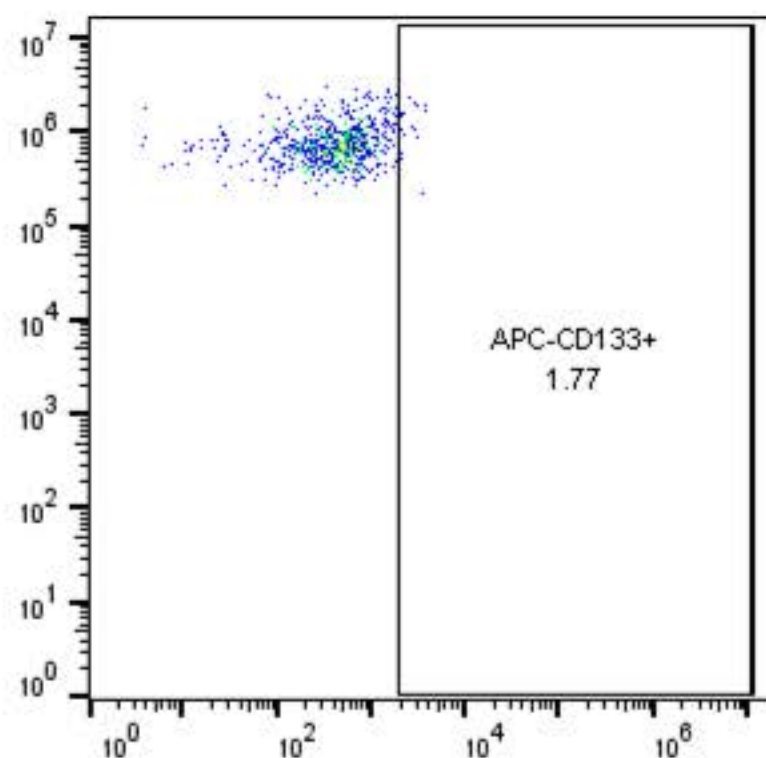
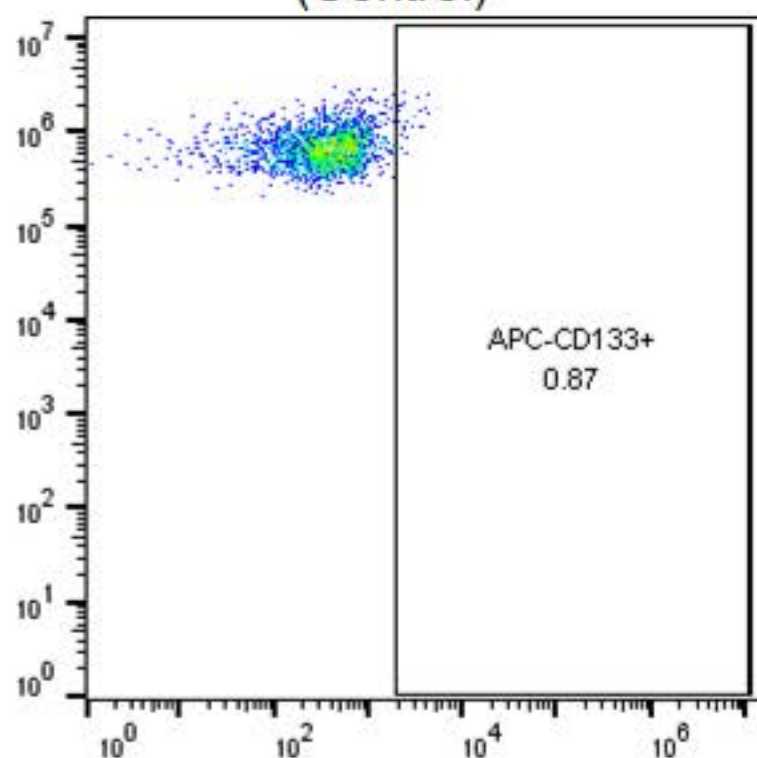
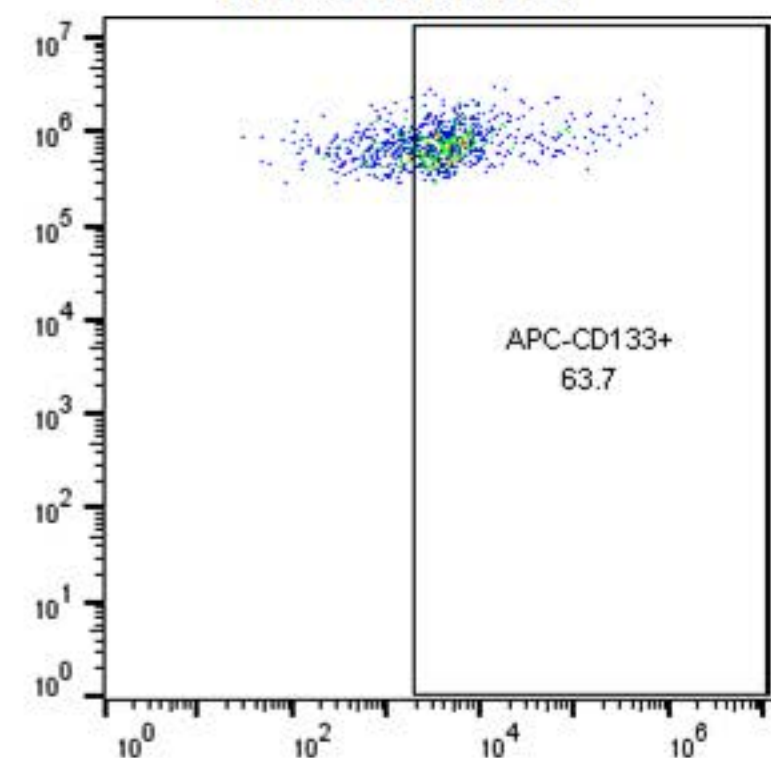


F DDK-UBXN2A
Alexa Fluor 647
Rat Anti-Human Lgr5



SSC-A :: SSC-A

Como-FL4-A::LGR5-Alexa476-A

ADDK-Empty-unstained
(Control)**B**DDK-Empty
APC Mouse IgG1 κ Isotype (Control)**C**DDK-Empty
APC Mouse Anti-Human CD133
Clone W6B3C1**D**DDK-UBXN2A-unstained
(Control)**E**DDK-UBXN2A
APC Mouse IgG1 κ Isotype
(Control)**F**DDK-UBXN2A
APC Mouse Anti-Human CD133
Clone W6B3C1

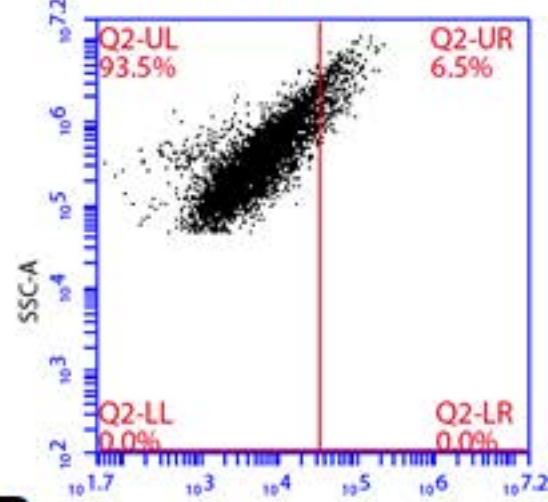
SSC-A :: SSC-A

FL4-A :: CD133-APC-A

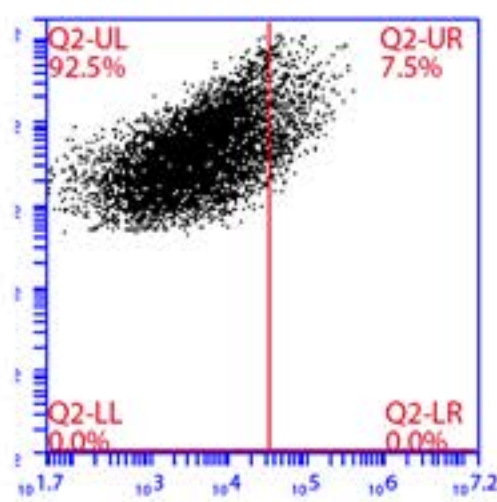
5-FU-resistant HCT-116 colon cancer cell line

A

GFP-Empty-No Dox
Gate: P1 in all

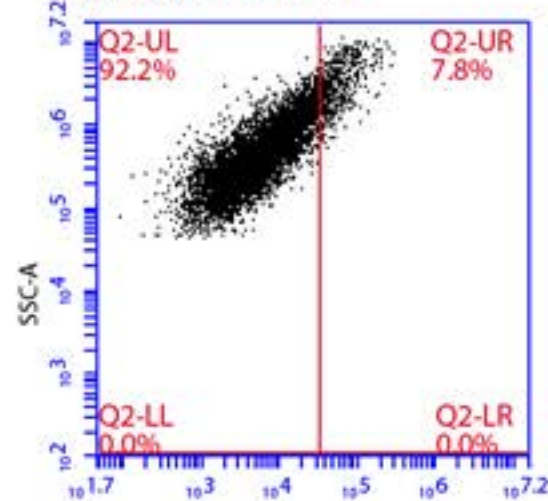


GFP-Empty-Plus Dox
Gate: P1 in all

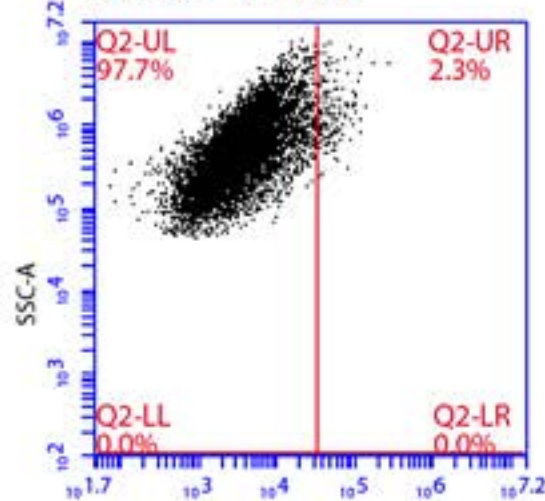


B

GFP-UBXN2A-No Dox
Gate: P1 in all

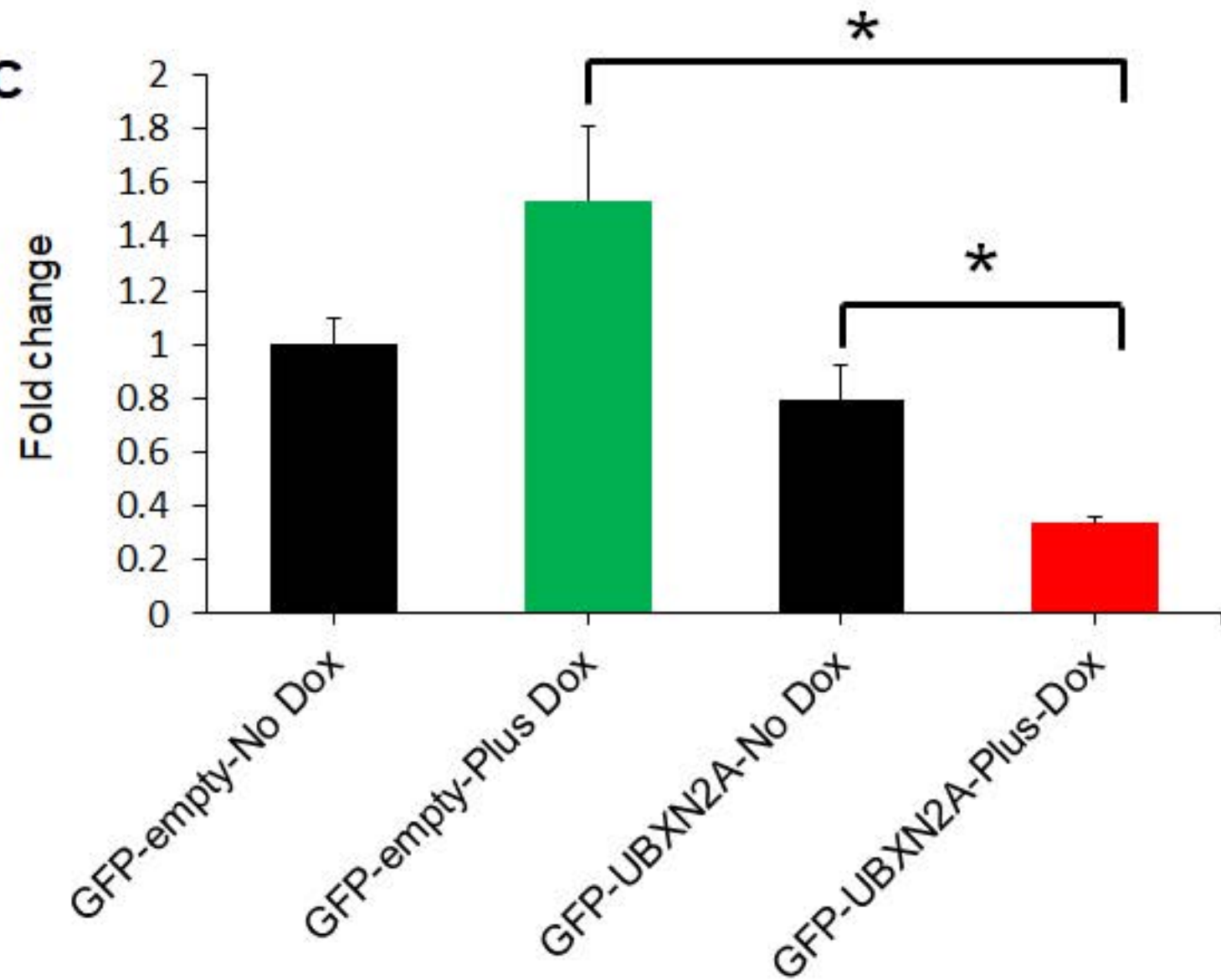


GFP-UBXN2A-Plus Dox
Gate: P1 in all



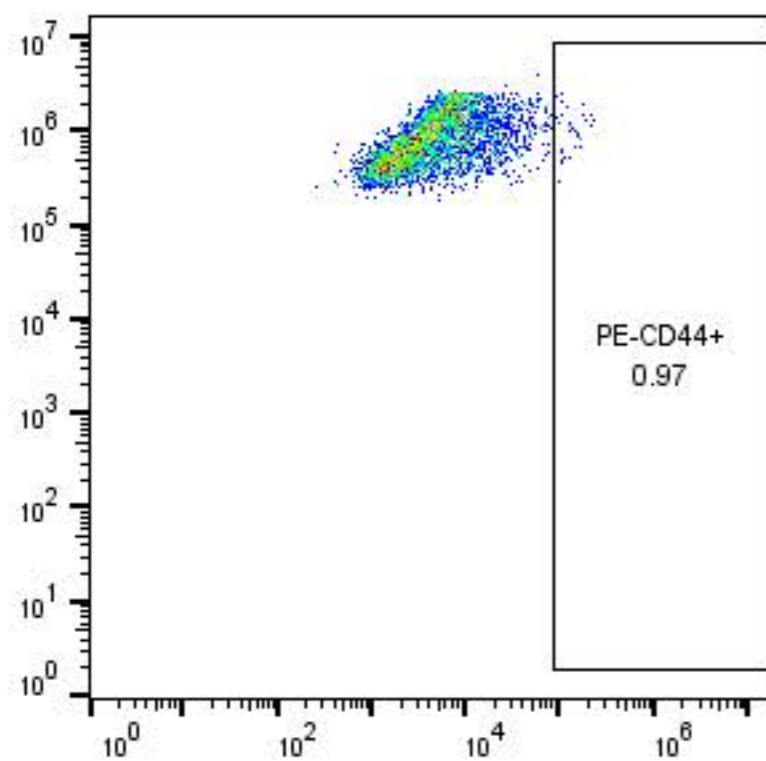
Phospho-Akt (ser 473)
Alexa Fluor 647 conjugate

C

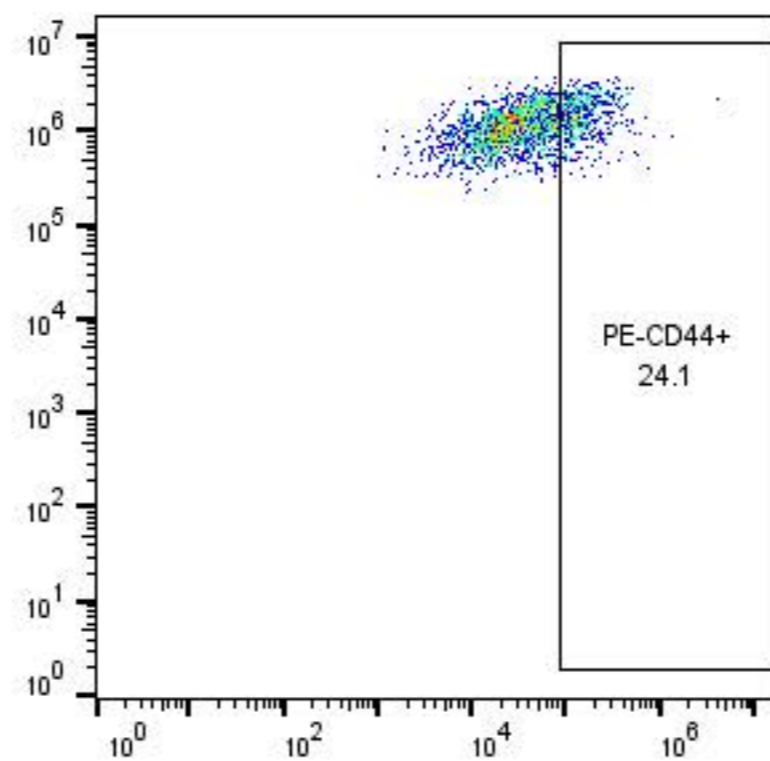


A

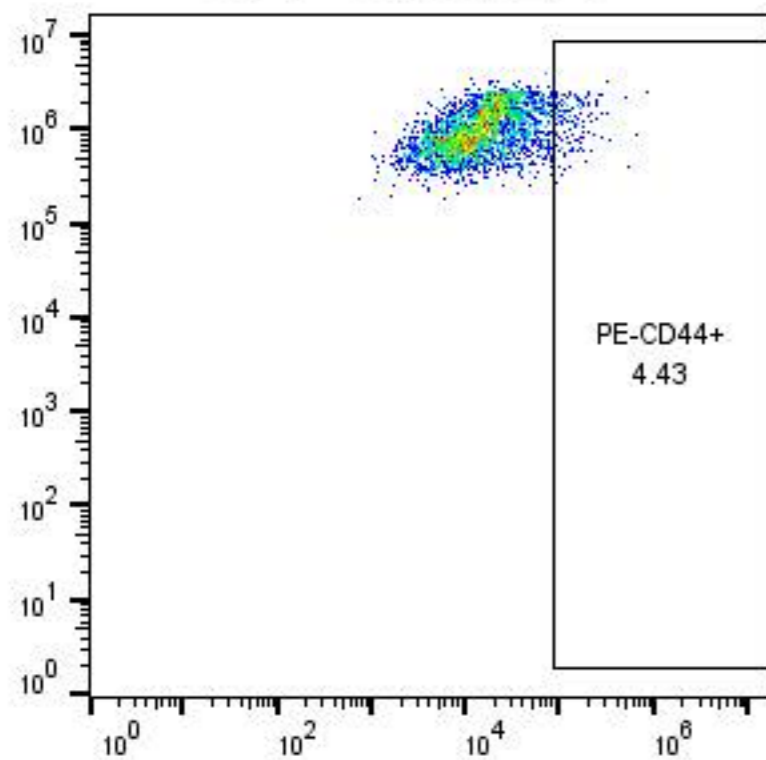
Cells-unstained



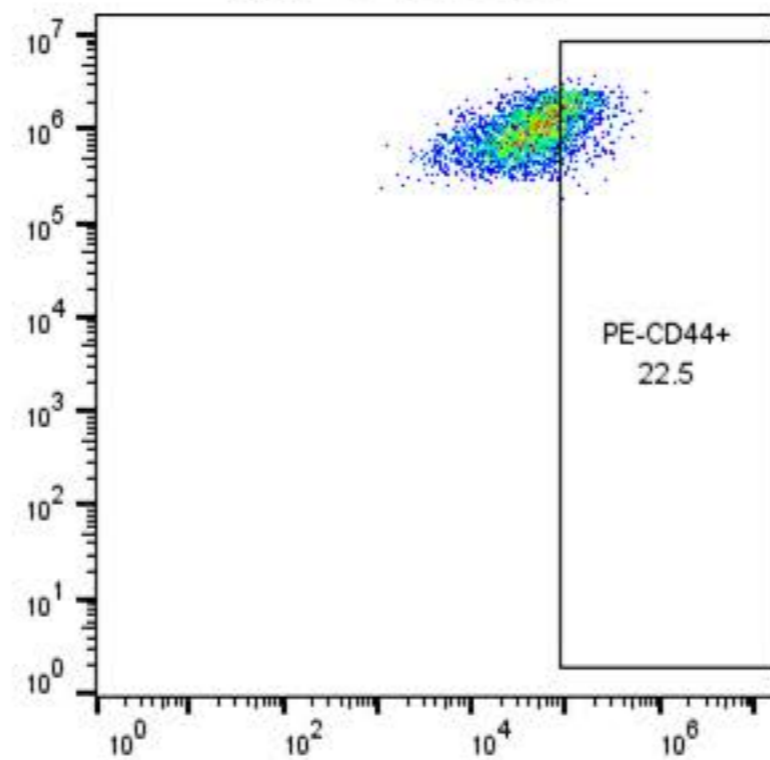
GFP-Empty



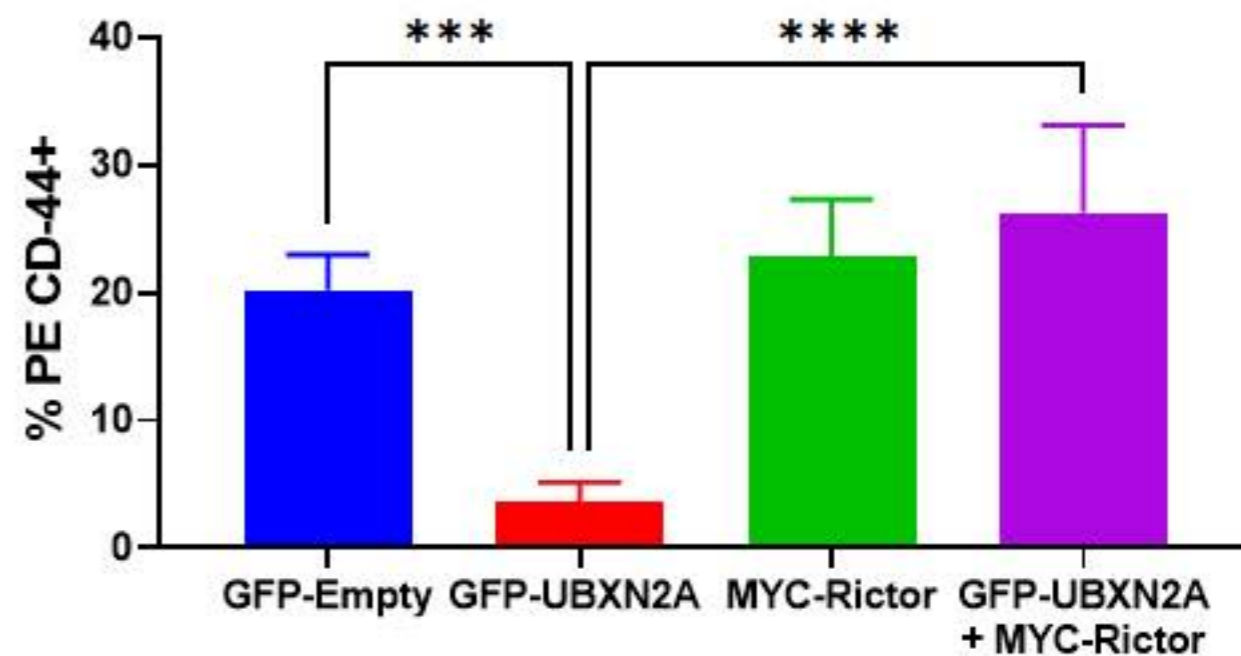
GFP-UBXN2A



MYC-Rictor



Como-FL2-A::PE-CD44-A

B**C**GFP-Empty
+ MYC-Rictor