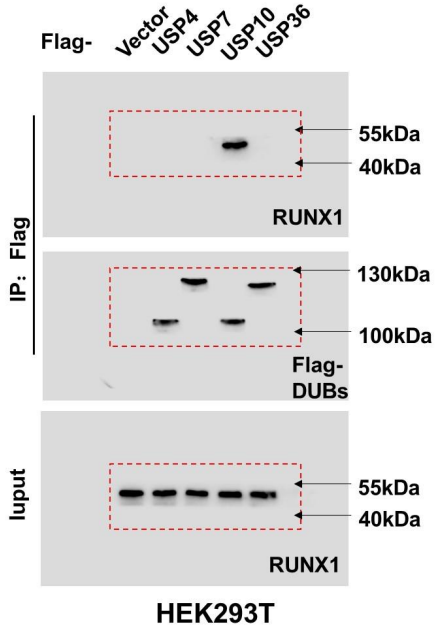
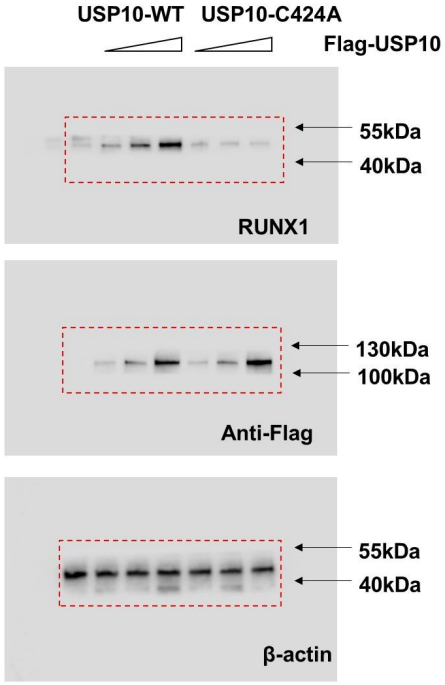
Figure 1B



HEK293T

Figure 1C



HEK293T

Figure 1F

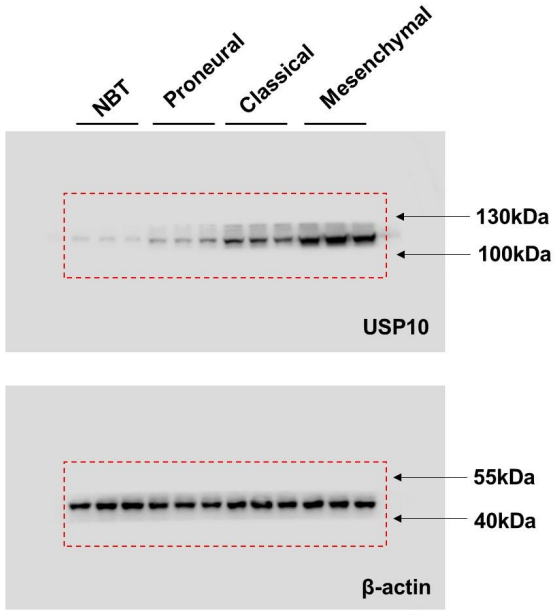


Figure 1G

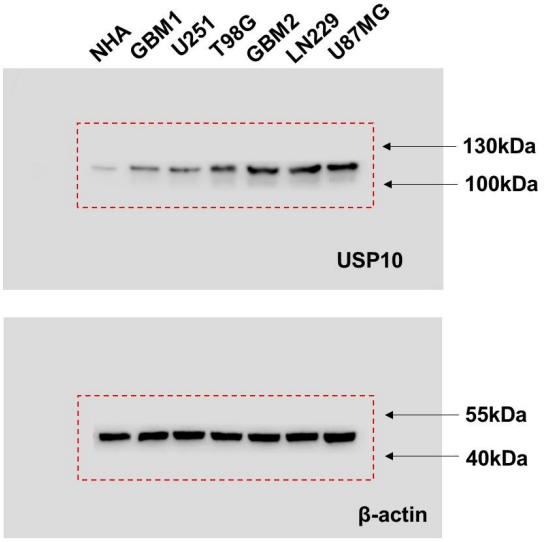


Figure 1H

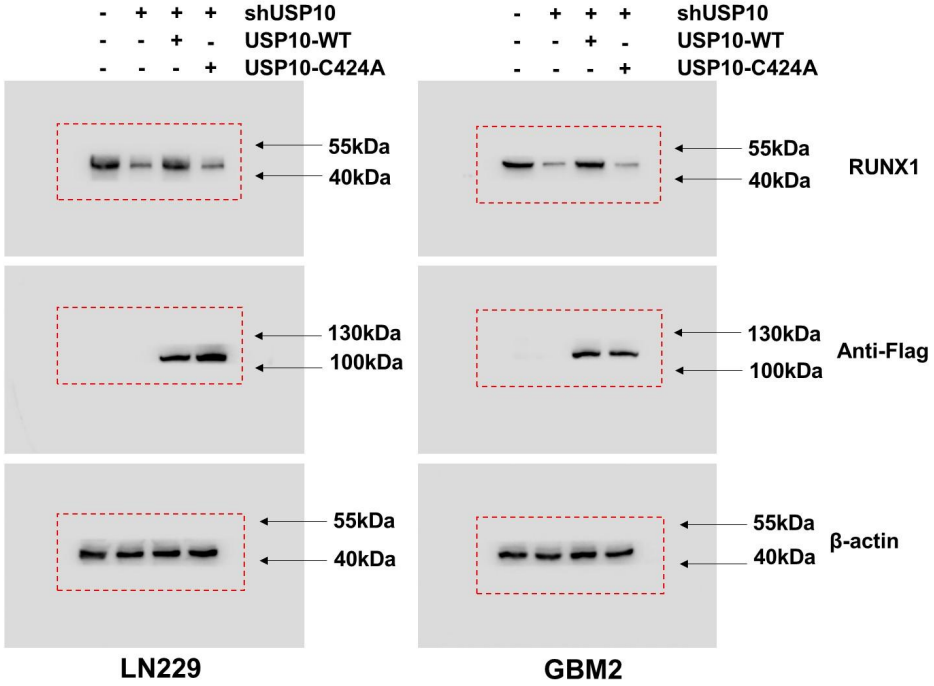


Figure 2A

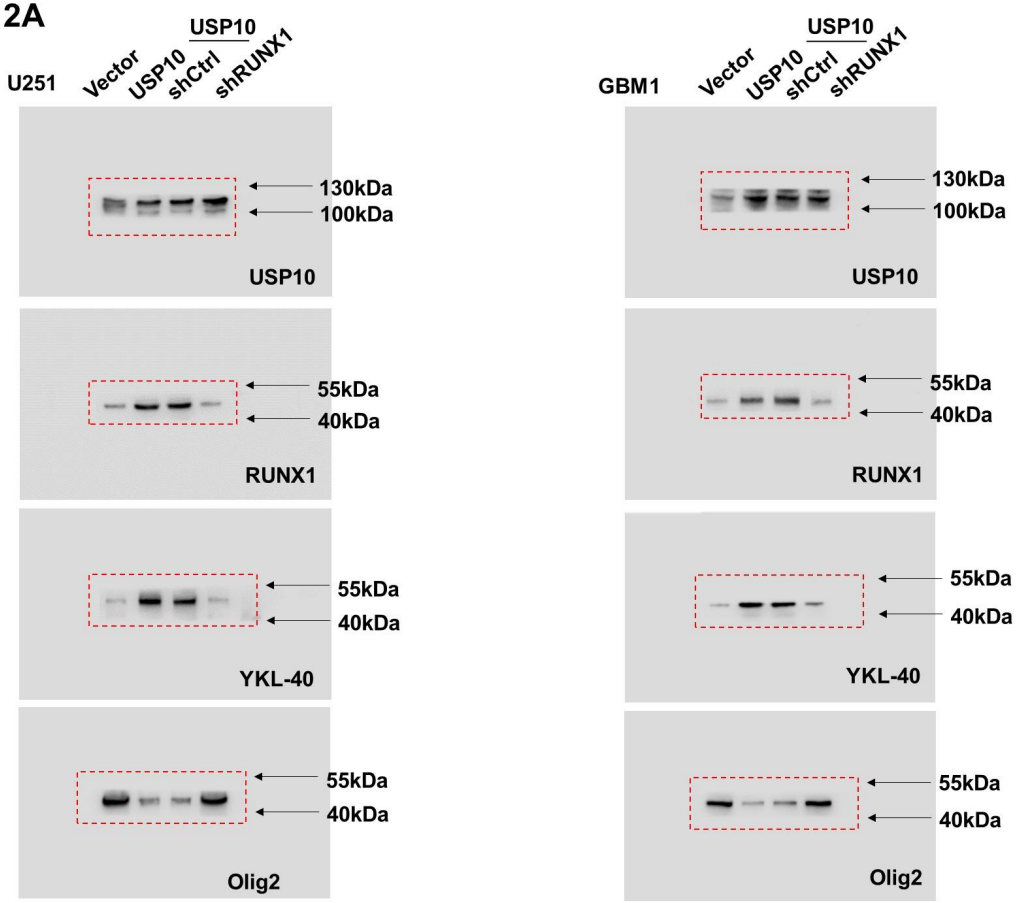

U251
Vector
USP10
USP10
shCtrl
shRUNX1
130kDa
100kDa
USP10
55kDa
40kDa
RUNX1
55kDa
40kDa
YKL-40
55kDa
40kDa
Olig2
GBM1
Vector
USP10
USP10
shCtrl
shRUNX1
130kDa
100kDa
USP10
55kDa
40kDa
RUNX1
55kDa
40kDa
YKL-40
55kDa
40kDa
Olig2

Figure 2A

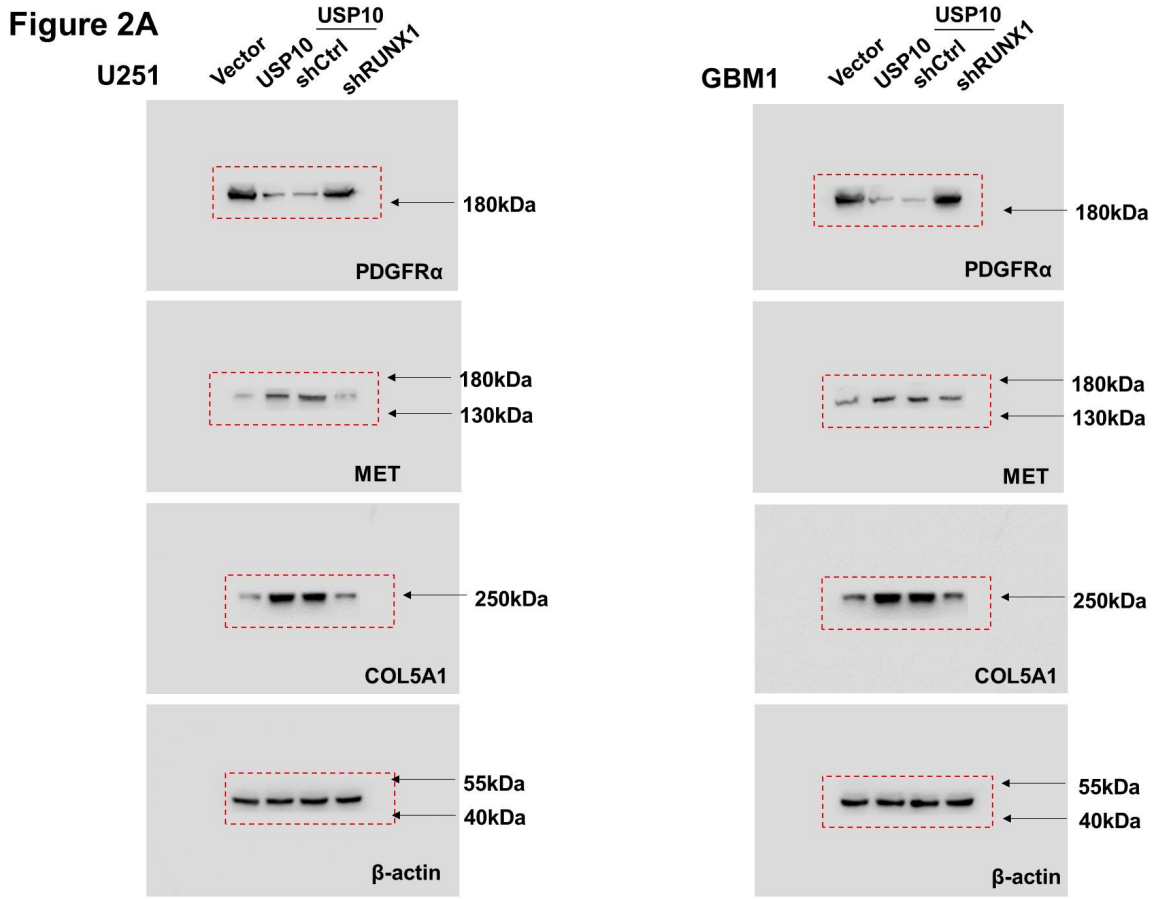

U251
Vector
USP10
shCtrl
shRUNX1
USP10
180kDa
PDGFRα
180kDa
130kDa
MET
250kDa
COL5A1
55kDa
40kDa
β-actin
GBM1
Vector
USP10
shCtrl
shRUNX1
USP10
180kDa
PDGFRα
180kDa
130kDa
MET
250kDa
COL5A1
55kDa
40kDa
β-actin

Figure 3A

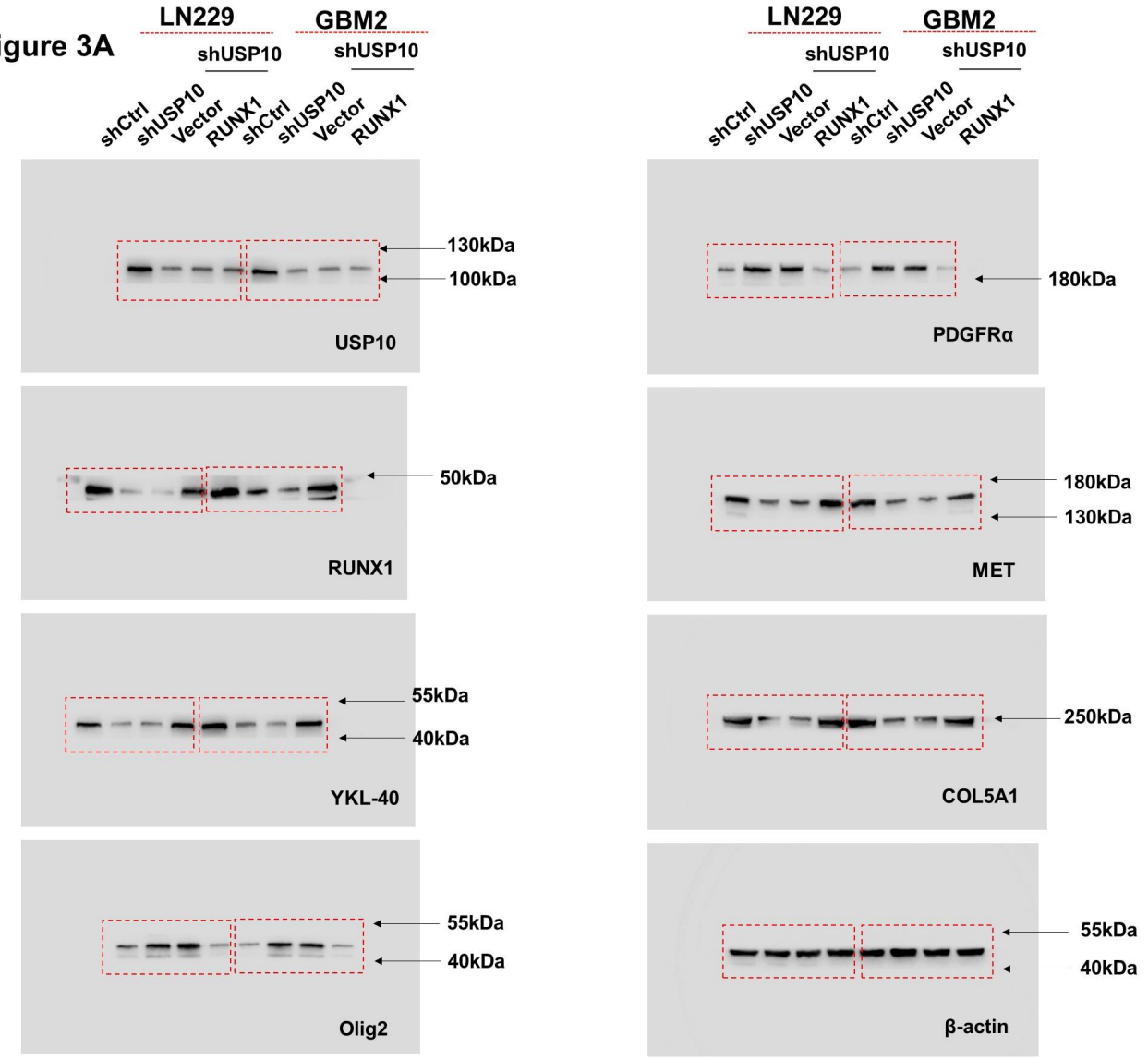

LN229
GBM2
shUSP10
shUSP10
shCtrl
shUSP10
Vector
RUNX1
shCtrl
shUSP10
Vector
RUNX1
130kDa
100kDa
USP10
50kDa
RUNX1
55kDa
40kDa
YKL-40
55kDa
40kDa
Olig2
LN229
GBM2
shUSP10
shUSP10
shCtrl
shUSP10
Vector
RUNX1
shCtrl
shUSP10
Vector
RUNX1
180kDa
PDGFRα
180kDa
130kDa
MET
250kDa
COL5A1
55kDa
40kDa
β-actin

Figure 4A

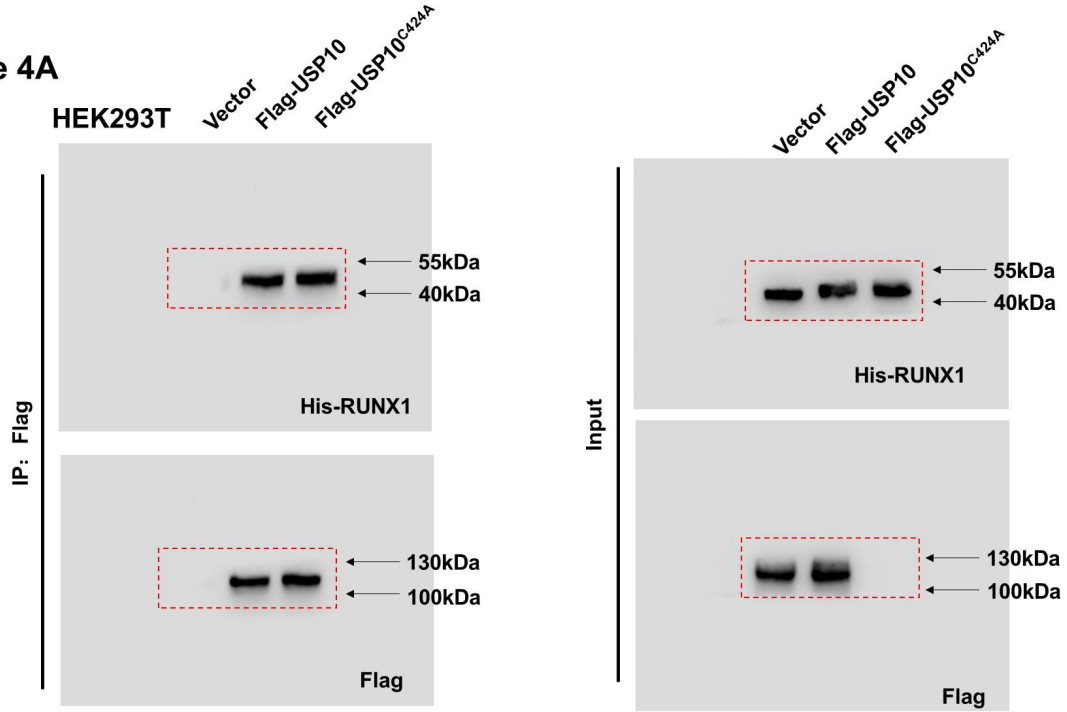


Figure 4B

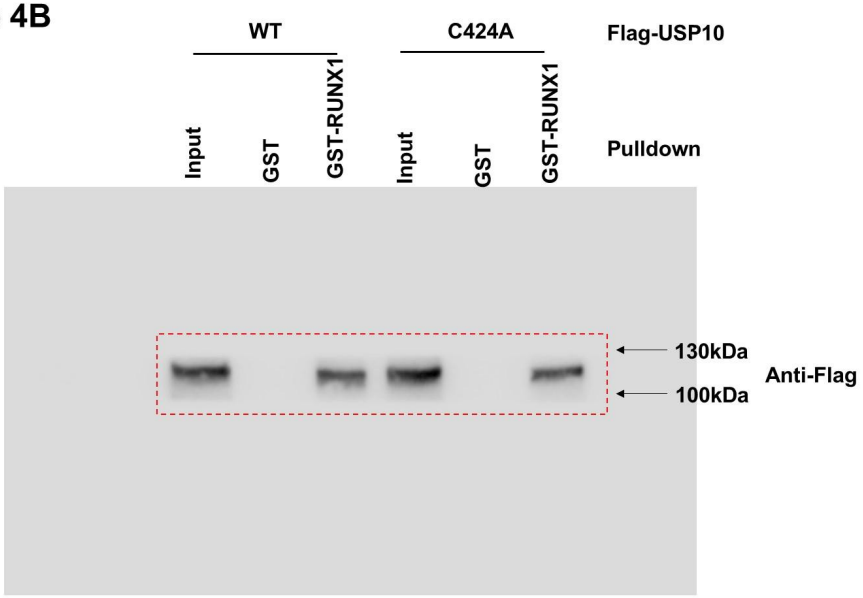


Figure 4D

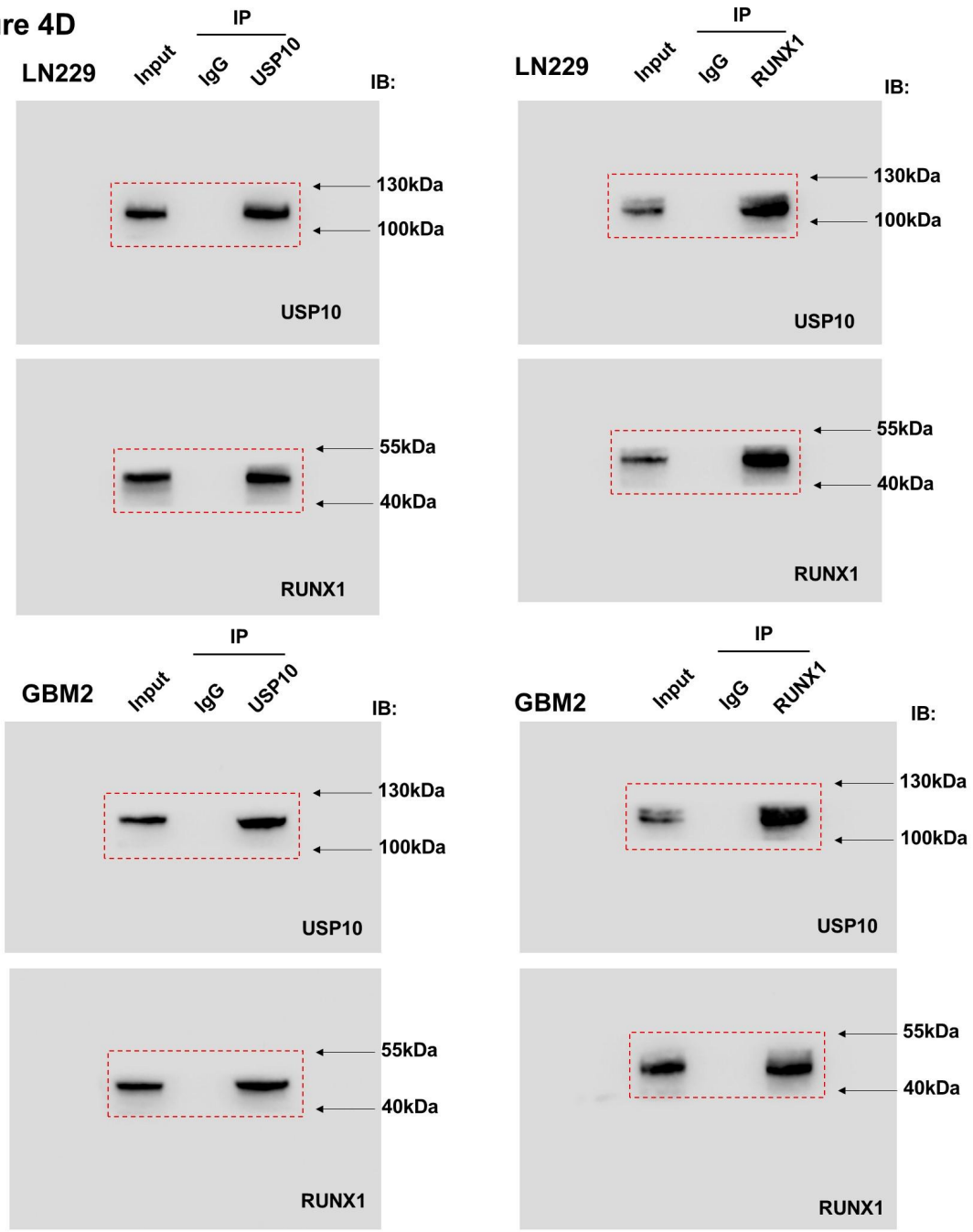

LN229
Input
IP
IgG
USP10
IB:
130kDa
100kDa
USP10
55kDa
40kDa
RUNX1
LN229
Input
IP
IgG
RUNX1
IB:
130kDa
100kDa
USP10
55kDa
40kDa
RUNX1
GBM2
Input
IP
IgG
USP10
IB:
130kDa
100kDa
USP10
55kDa
40kDa
RUNX1
GBM2
Input
IP
IgG
RUNX1
IB:
130kDa
100kDa
USP10
55kDa
40kDa
RUNX1

Figure 4F

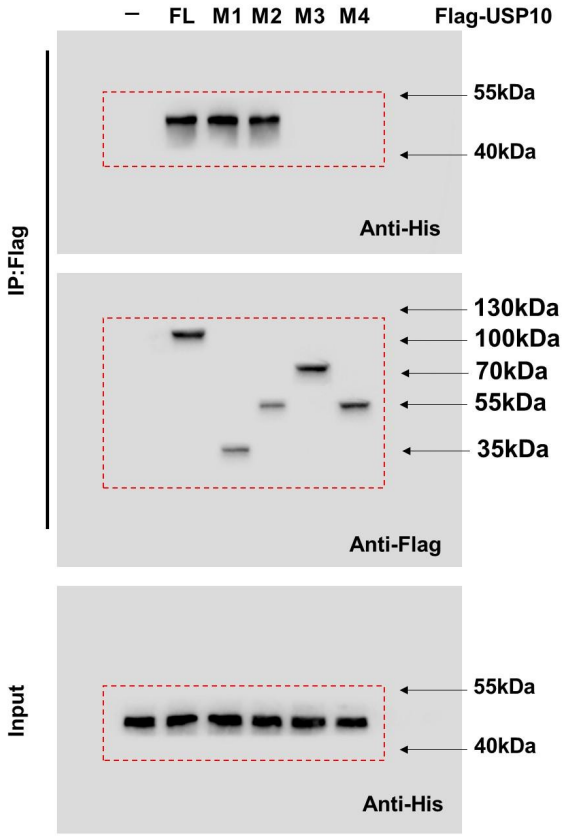


Figure 4G

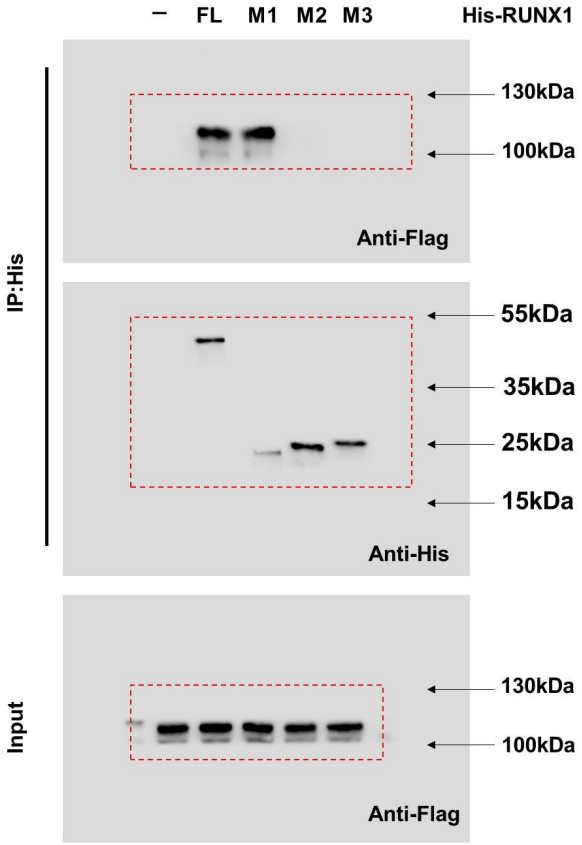


Figure 5A

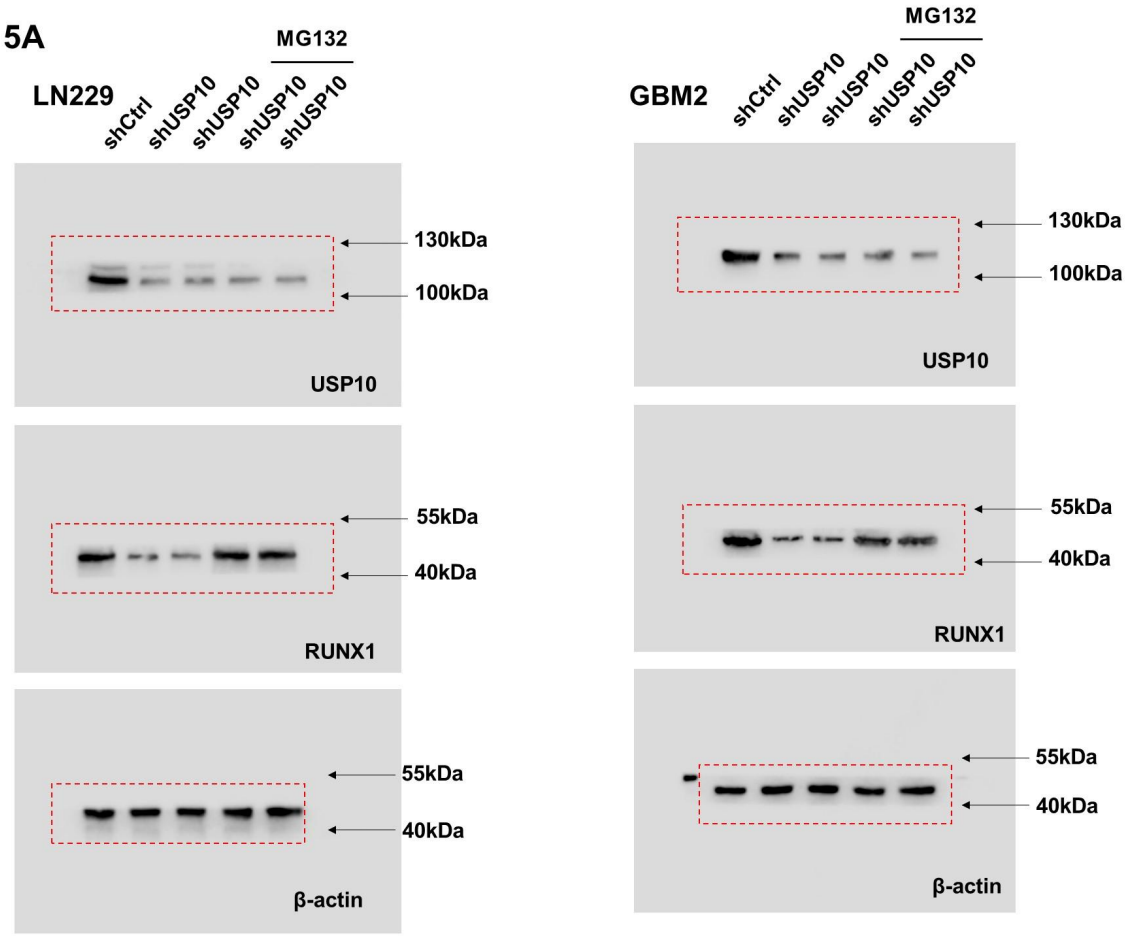

LN229
shCtrl
shUSP10
shUSP10
shUSP10
shUSP10
MG132
130kDa
100kDa
USP10
55kDa
40kDa
RUNX1
55kDa
40kDa
β-actin
GBM2
shCtrl
shUSP10
shUSP10
shUSP10
shUSP10
MG132
130kDa
100kDa
USP10
55kDa
40kDa
RUNX1
55kDa
40kDa
β-actin

Figure 5B

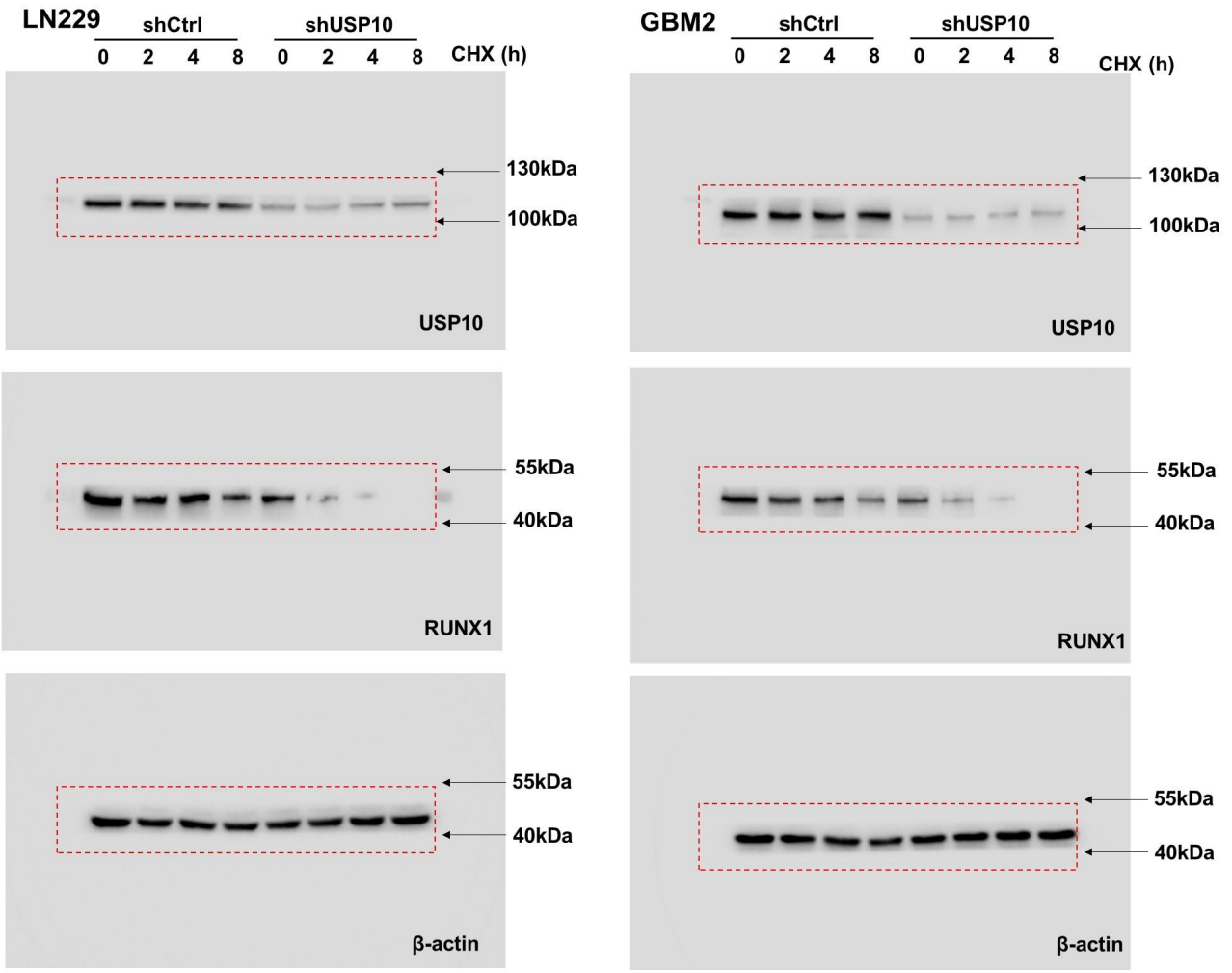

LN229
shCtrl
shUSP10
0 2 4 8 0 2 4 8
CHX (h)
130kDa
100kDa
USP10
55kDa
40kDa
RUNX1
55kDa
40kDa
β-actin
GBM2
shCtrl
shUSP10
0 2 4 8 0 2 4 8
CHX (h)
130kDa
100kDa
USP10
55kDa
40kDa
RUNX1
55kDa
40kDa
β-actin

Figure 5C

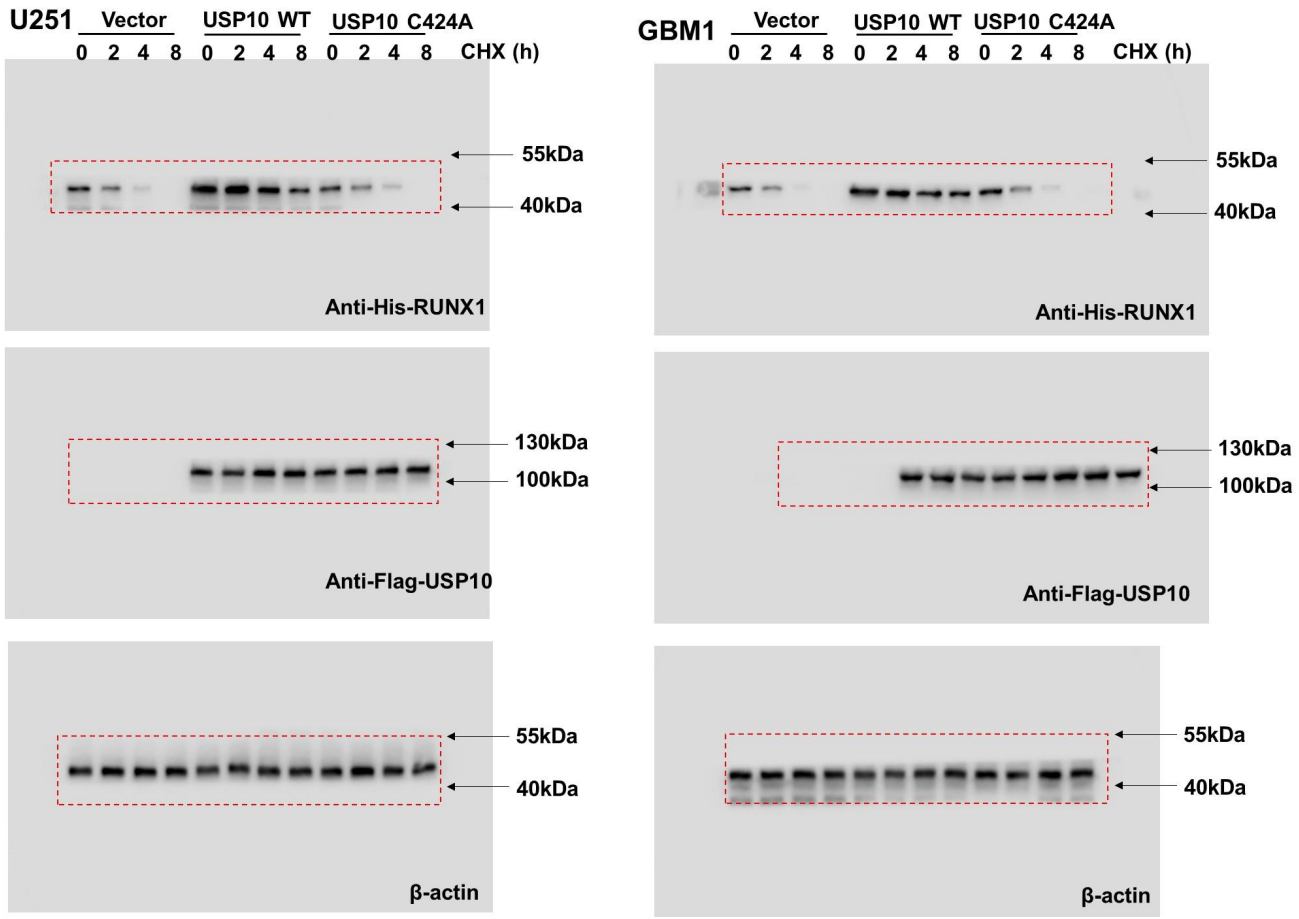

U251
Vector
USP10 WT
USP10 C424A
0 2 4 8 0 2 4 8 0 2 4 8
CHX (h)
55kDa
40kDa
Anti-His-RUNX1
130kDa
100kDa
Anti-Flag-USP10
55kDa
40kDa
β-actin
GBM1
Vector
USP10 WT
USP10 C424A
0 2 4 8 0 2 4 8 0 2 4 8
CHX (h)
55kDa
40kDa
Anti-His-RUNX1
130kDa
100kDa
Anti-Flag-USP10
55kDa
40kDa
β-actin

Figure 5D

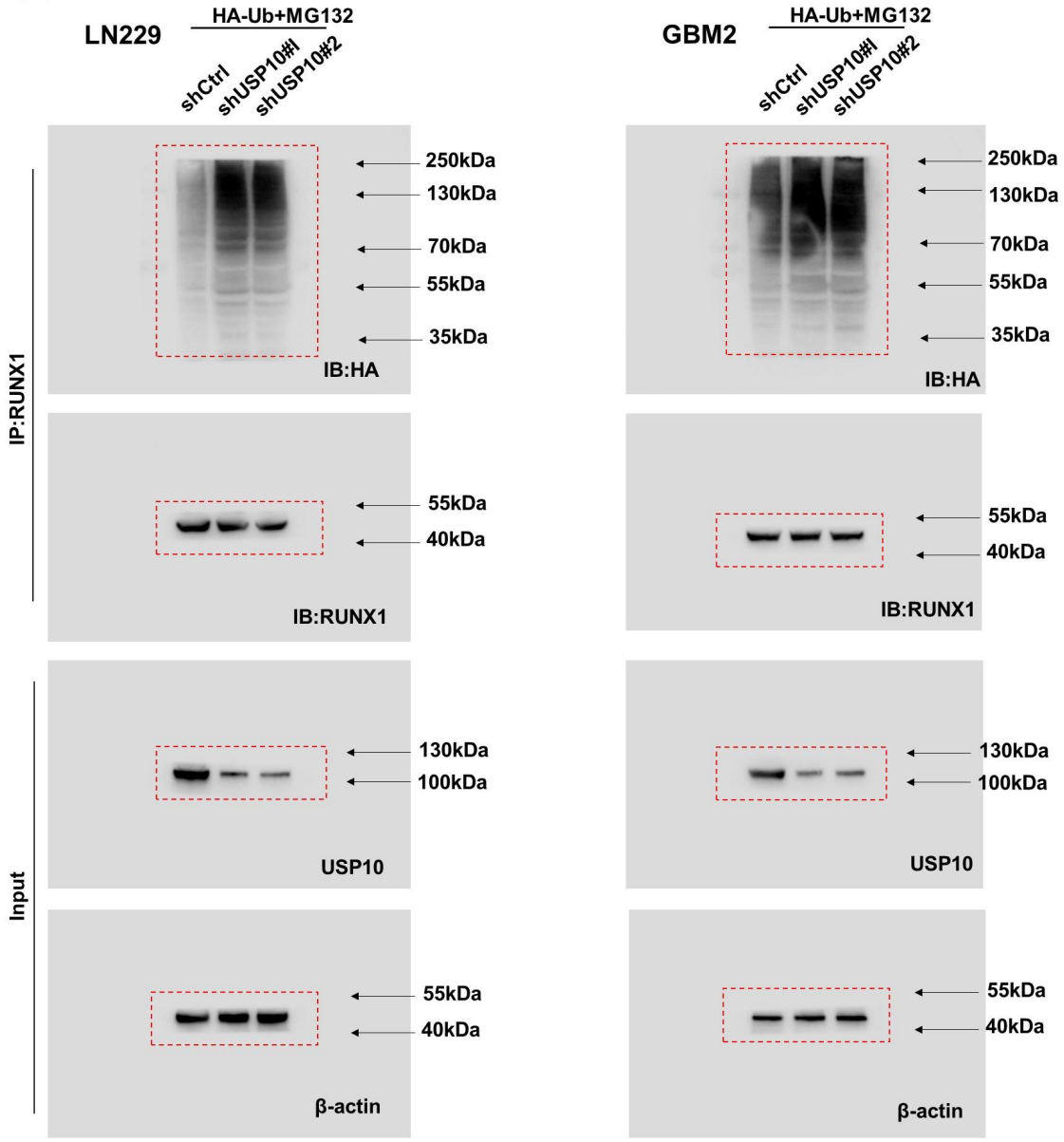

LN229
HA-Ub+MG132
shCtrl
shUSP10#1
shUSP10#2
GBM2
HA-Ub+MG132
shCtrl
shUSP10#1
shUSP10#2
IP:RUNX1
Input
250kDa
130kDa
70kDa
55kDa
35kDa
IB:HA
55kDa
40kDa
IB:RUNX1
130kDa
100kDa
USP10
55kDa
40kDa
β-actin

Figure 5E

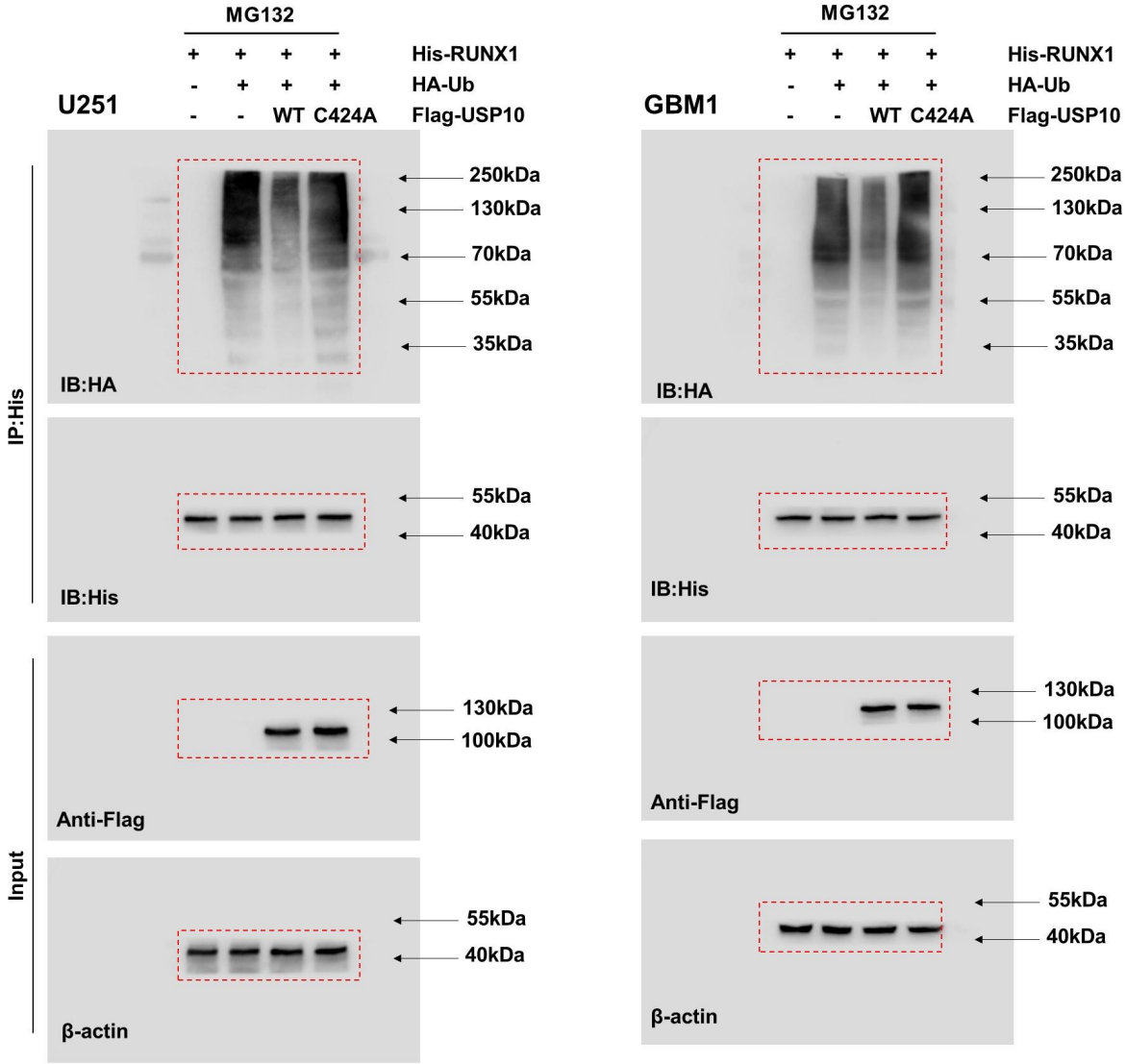

MG132
His-RUNX1
HA-Ub
Flag-USP10
U251
GBM1
+ + + +
- + + +
- - WT C424A
IP:His
Input
250kDa
130kDa
70kDa
55kDa
35kDa
IB:HA
55kDa
40kDa
IB:His
130kDa
100kDa
Anti-Flag
55kDa
40kDa
β-actin

Figure 5F

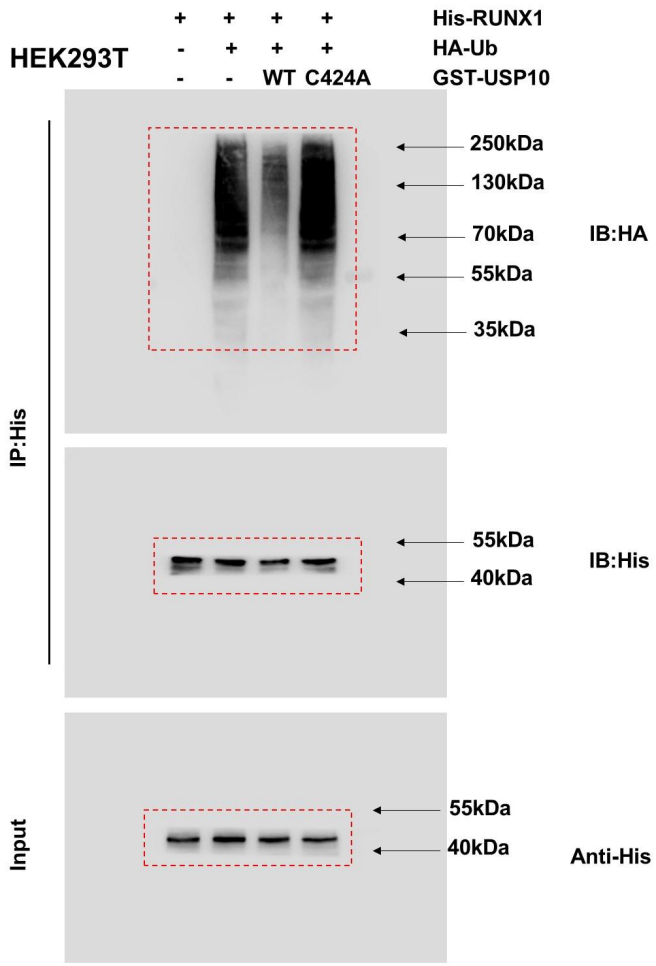

HEK293T
+ + + + His-RUNX1
- + + + HA-Ub
- - WT C424A GST-USP10
250kDa
130kDa
70kDa
55kDa
35kDa
IB:HA
IP:His
55kDa
40kDa
IB:His
Input
55kDa
40kDa
Anti-His

Figure 5G

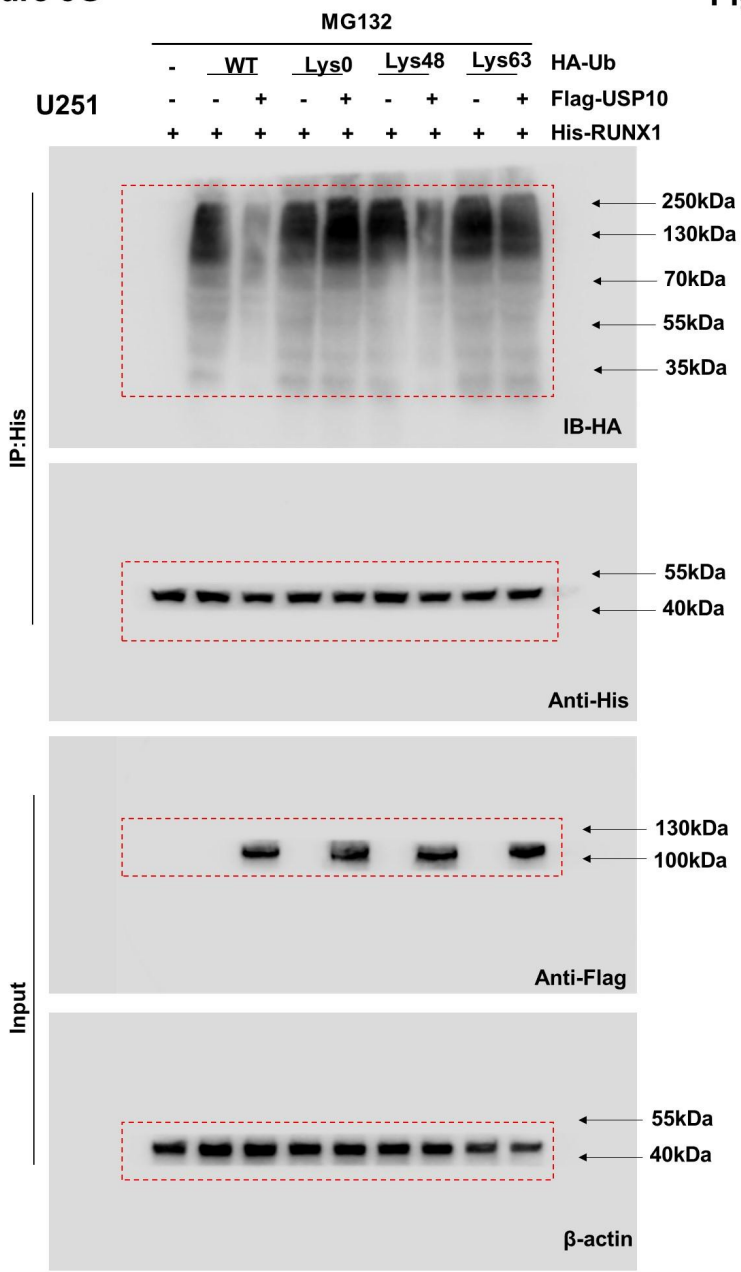


Figure 5H

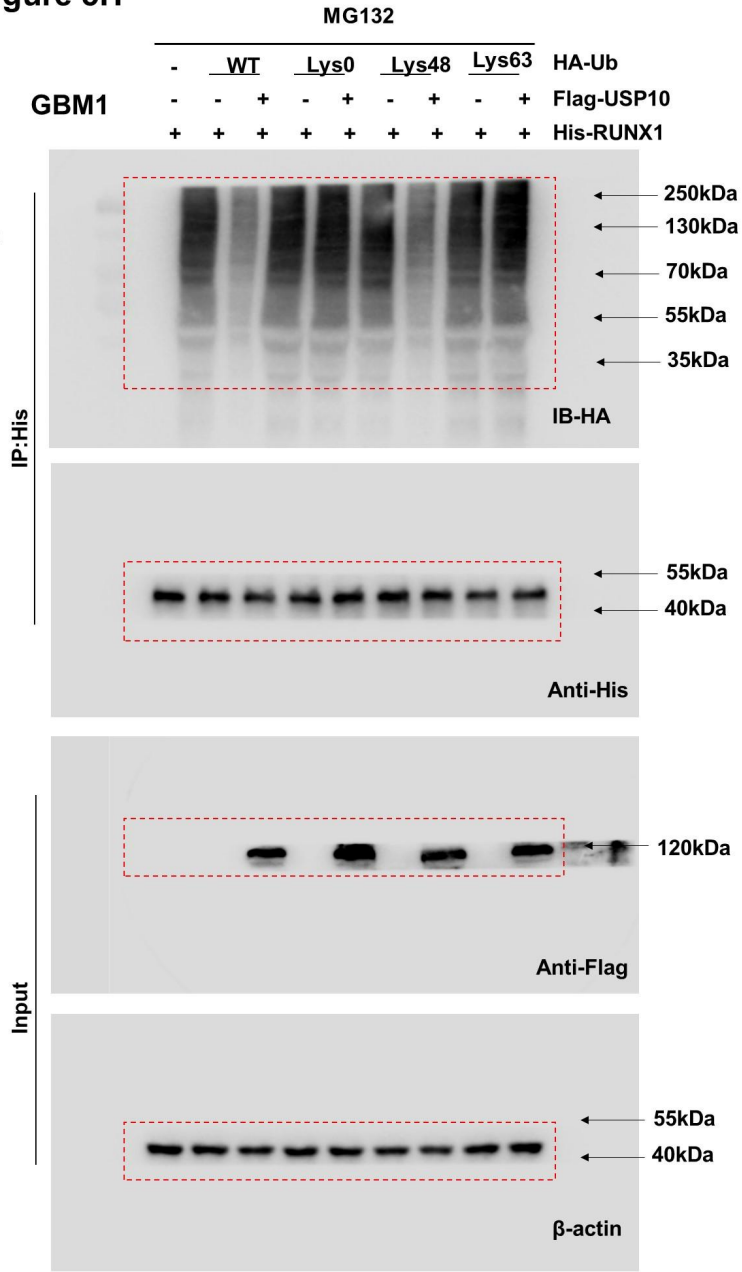


Figure 5l

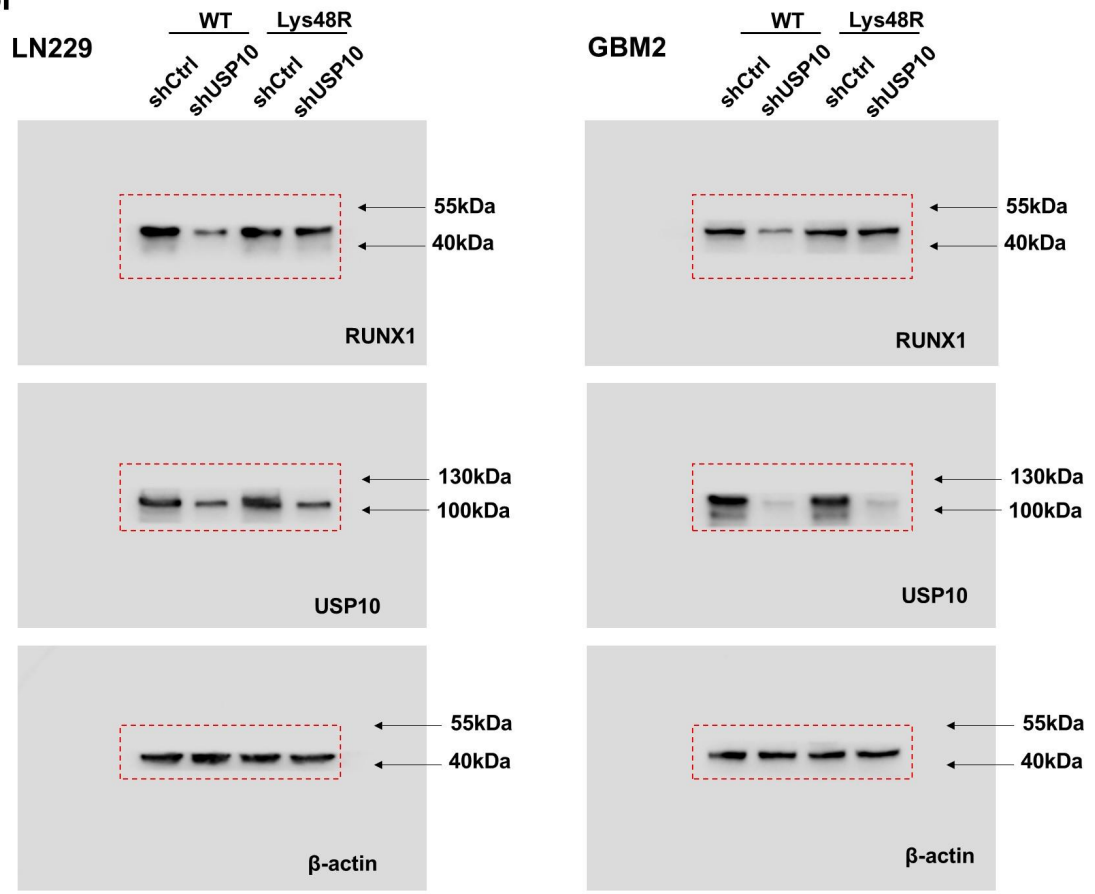

LN229
WT
Lys48R
shCtrl
shUSP10
shCtrl
shUSP10
55kDa
40kDa
RUNX1
130kDa
100kDa
USP10
55kDa
40kDa
β-actin
GBM2
WT
Lys48R
shCtrl
shUSP10
shCtrl
shUSP10
55kDa
40kDa
RUNX1
130kDa
100kDa
USP10
55kDa
40kDa
β-actin

Figure 6A

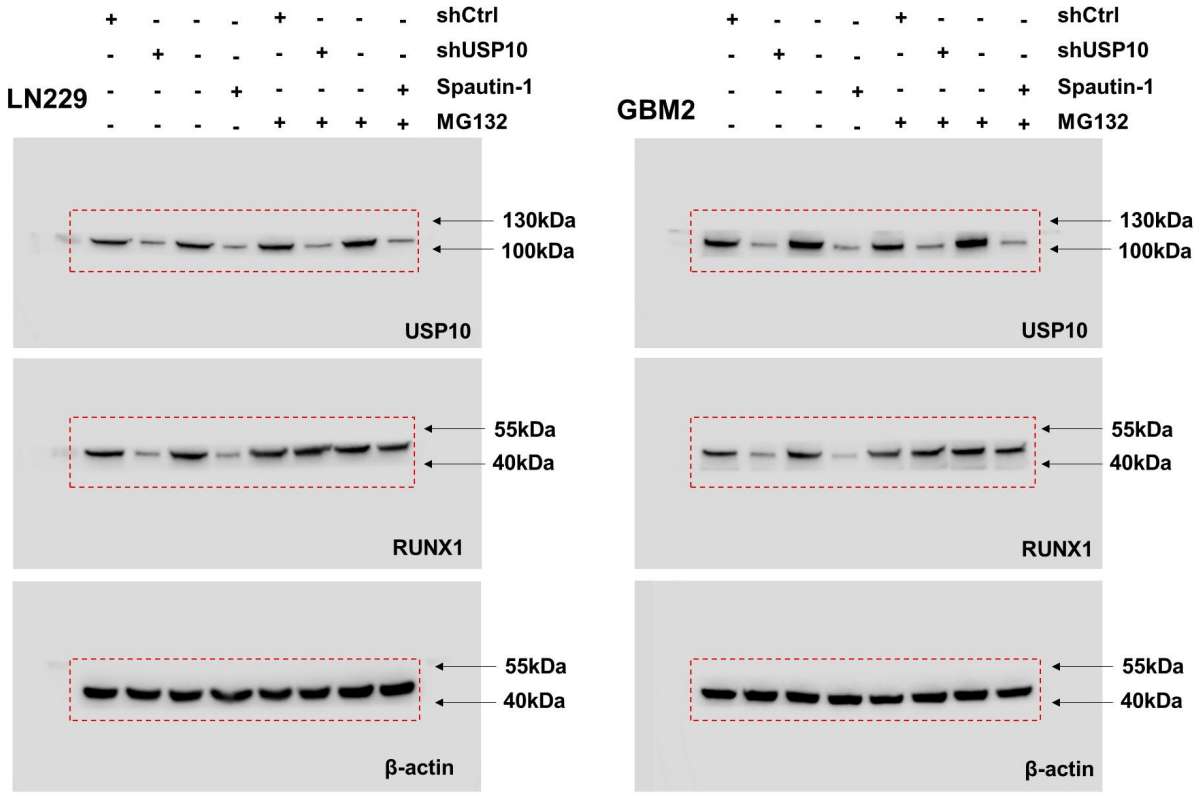

LN229
GBM2
shCtrl
shUSP10
Spautin-1
MG132
130kDa
100kDa
USP10
55kDa
40kDa
RUNX1
β-actin

Figure 6B

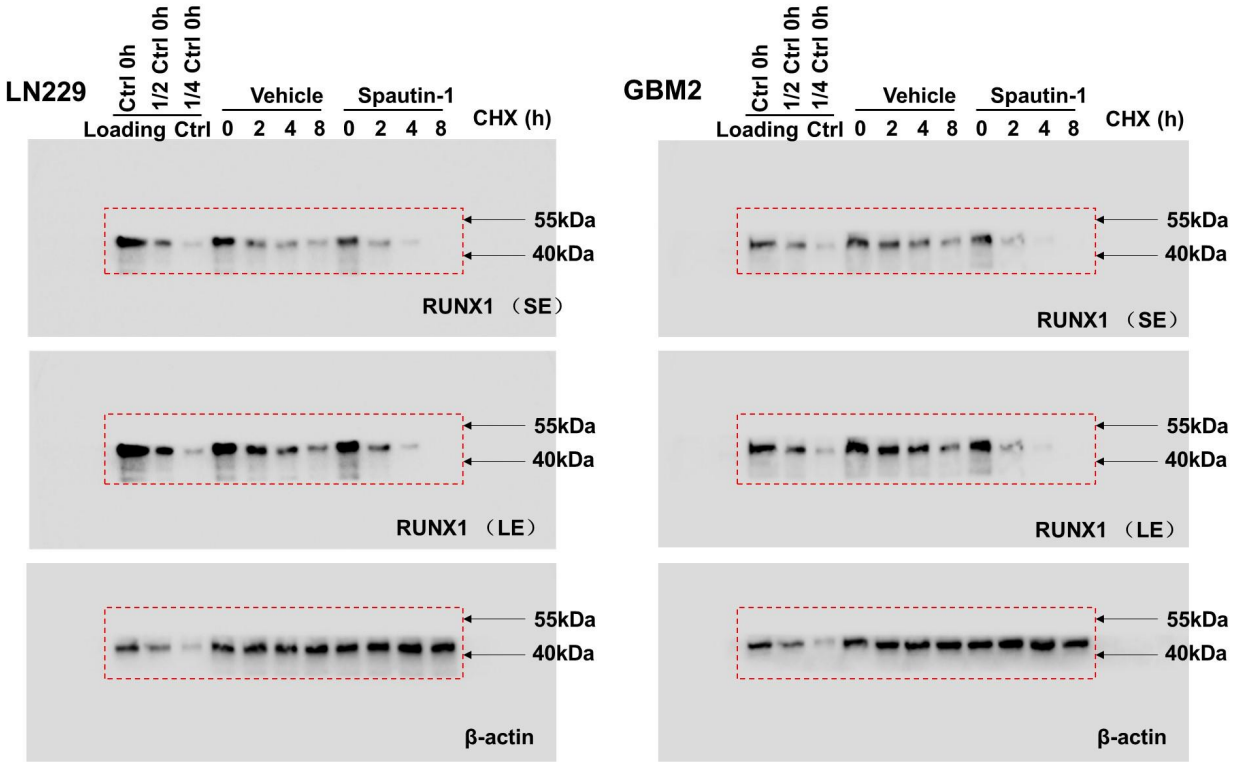

LN229
Ctrl 0h
1/2 Ctrl 0h
1/4 Ctrl 0h
Vehicle
Spautin-1
Loading Ctrl 0 2 4 8 0 2 4 8
CHX (h)
55kDa
40kDa
RUNX1 （SE）
RUNX1 （LE）
β-actin
GBM2
Ctrl 0h
1/2 Ctrl 0h
1/4 Ctrl 0h
Vehicle
Spautin-1
Loading Ctrl 0 2 4 8 0 2 4 8
CHX (h)
55kDa
40kDa
RUNX1 （SE）
RUNX1 （LE）
β-actin

Figure 6C

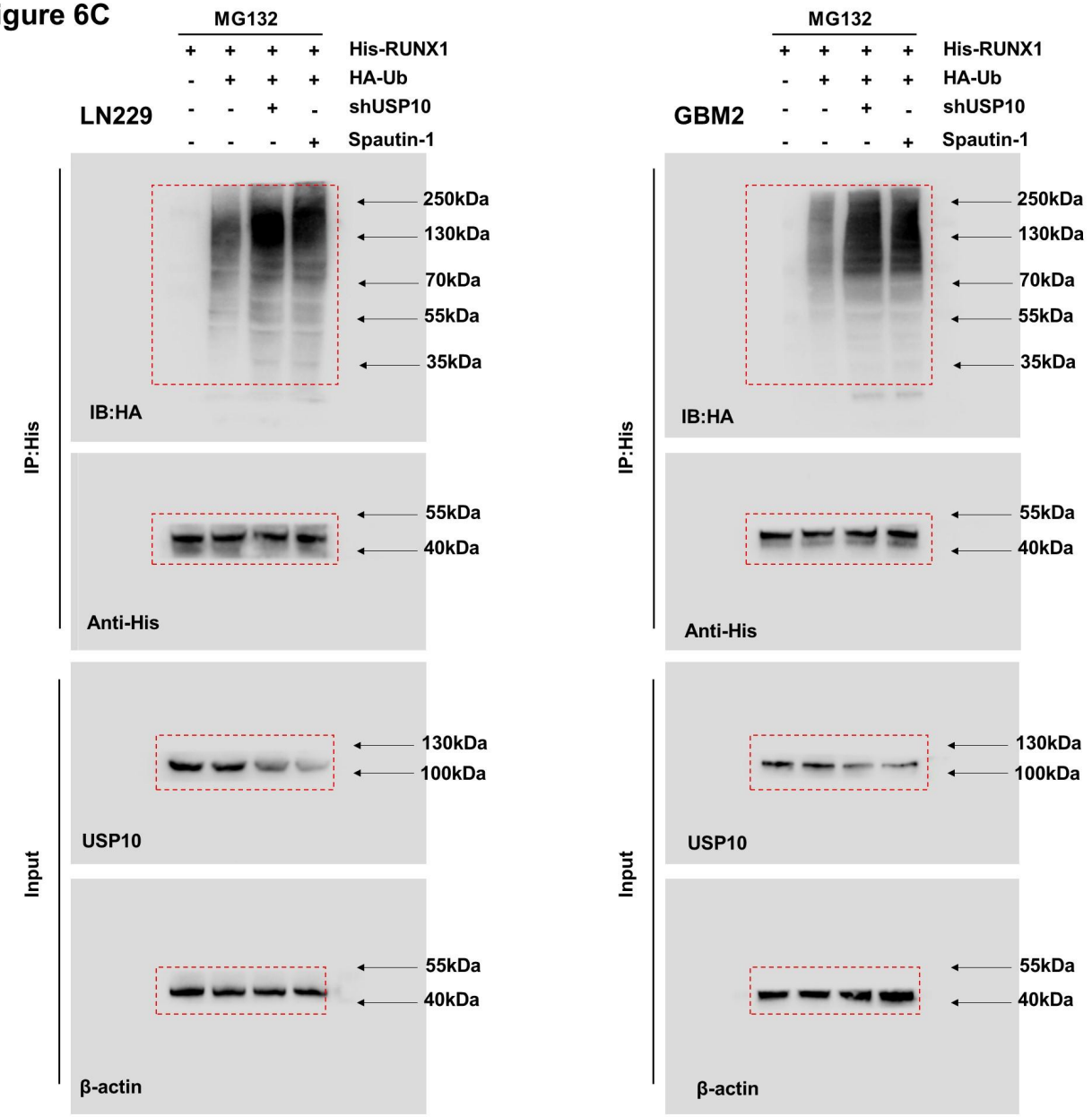

MG132
His-RUNX1
HA-Ub
shUSP10
Spautin-1
LN229
GBM2
250kDa
130kDa
70kDa
55kDa
35kDa
IB:HA
IP:His
55kDa
40kDa
Anti-His
130kDa
100kDa
USP10
Input
55kDa
40kDa
β-actin

Figure 6D

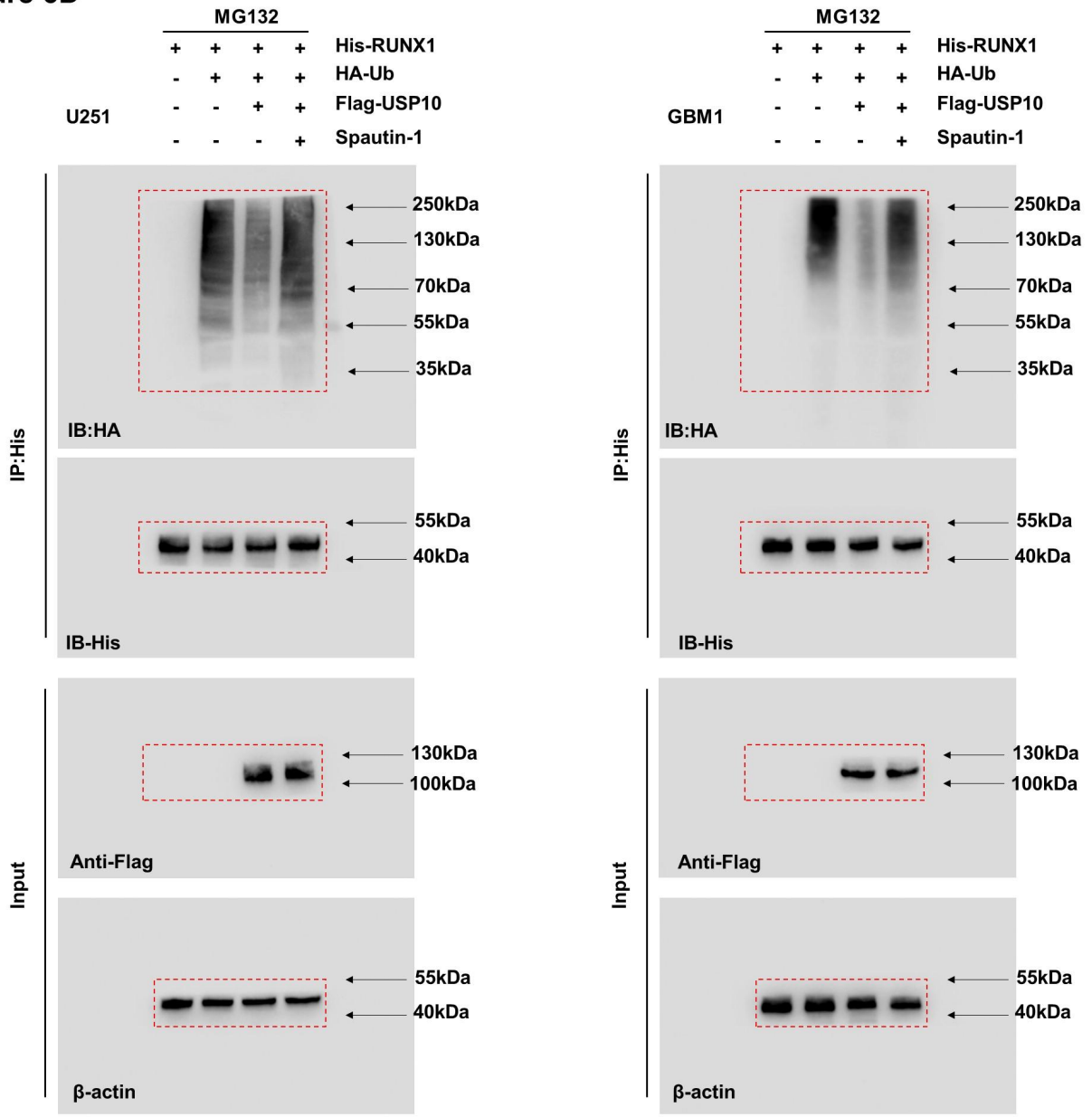

MG132
His-RUNX1
HA-Ub
Flag-USP10
Spautin-1
U251
GBM1
IP:His
IB:HA
IB-His
Input
Anti-Flag
β-actin
250kDa
130kDa
70kDa
55kDa
35kDa
40kDa
100kDa

Figure 6E

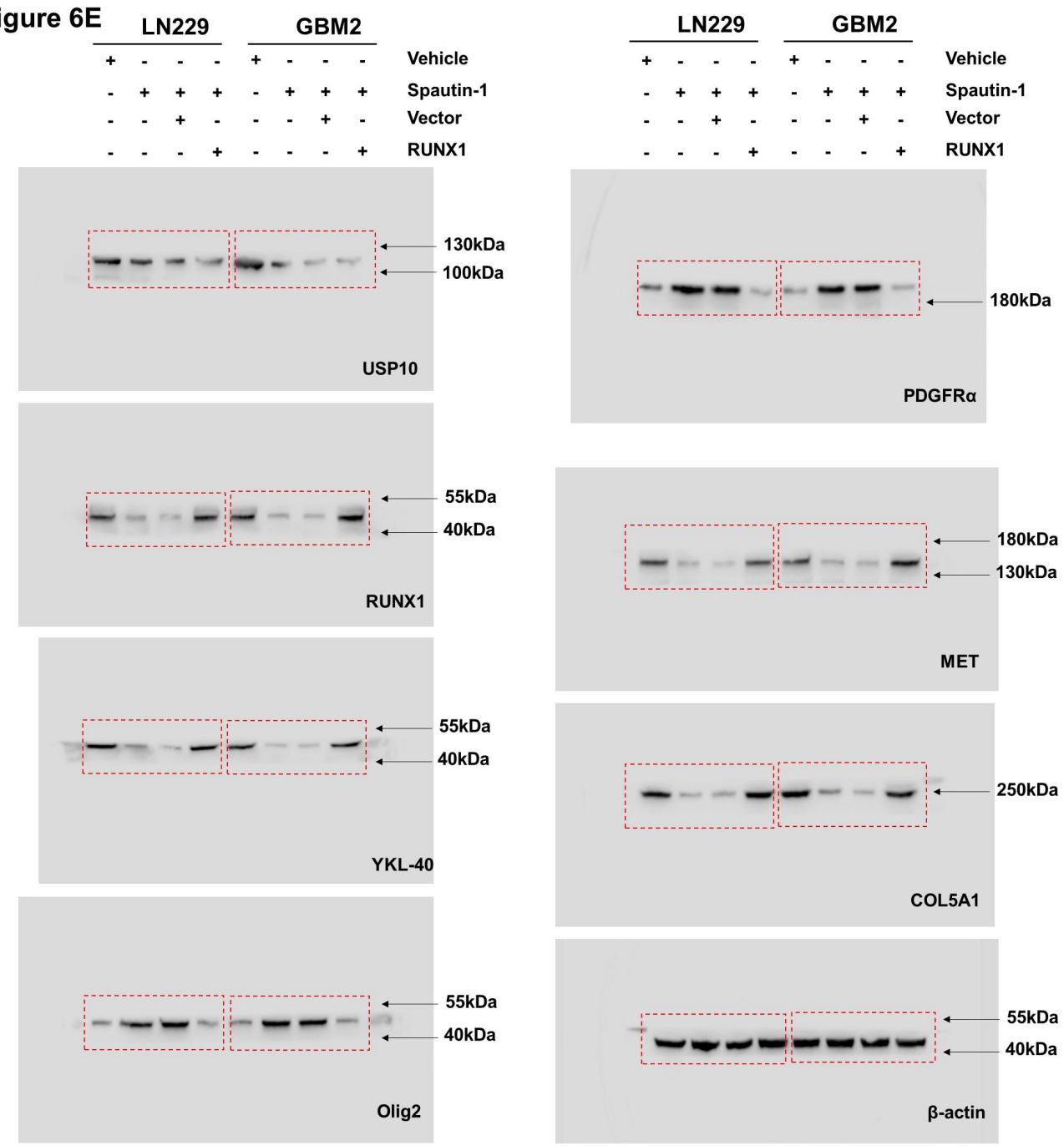

LN229
GBM2
Vehicle
Spautin-1
Vector
RUNX1
130kDa
100kDa
USP10
55kDa
40kDa
RUNX1
55kDa
40kDa
YKL-40
55kDa
40kDa
Olig2
LN229
GBM2
Vehicle
Spautin-1
Vector
RUNX1
180kDa
PDGFRα
180kDa
130kDa
MET
250kDa
COL5A1
55kDa
40kDa
β-actin

Figure 6F

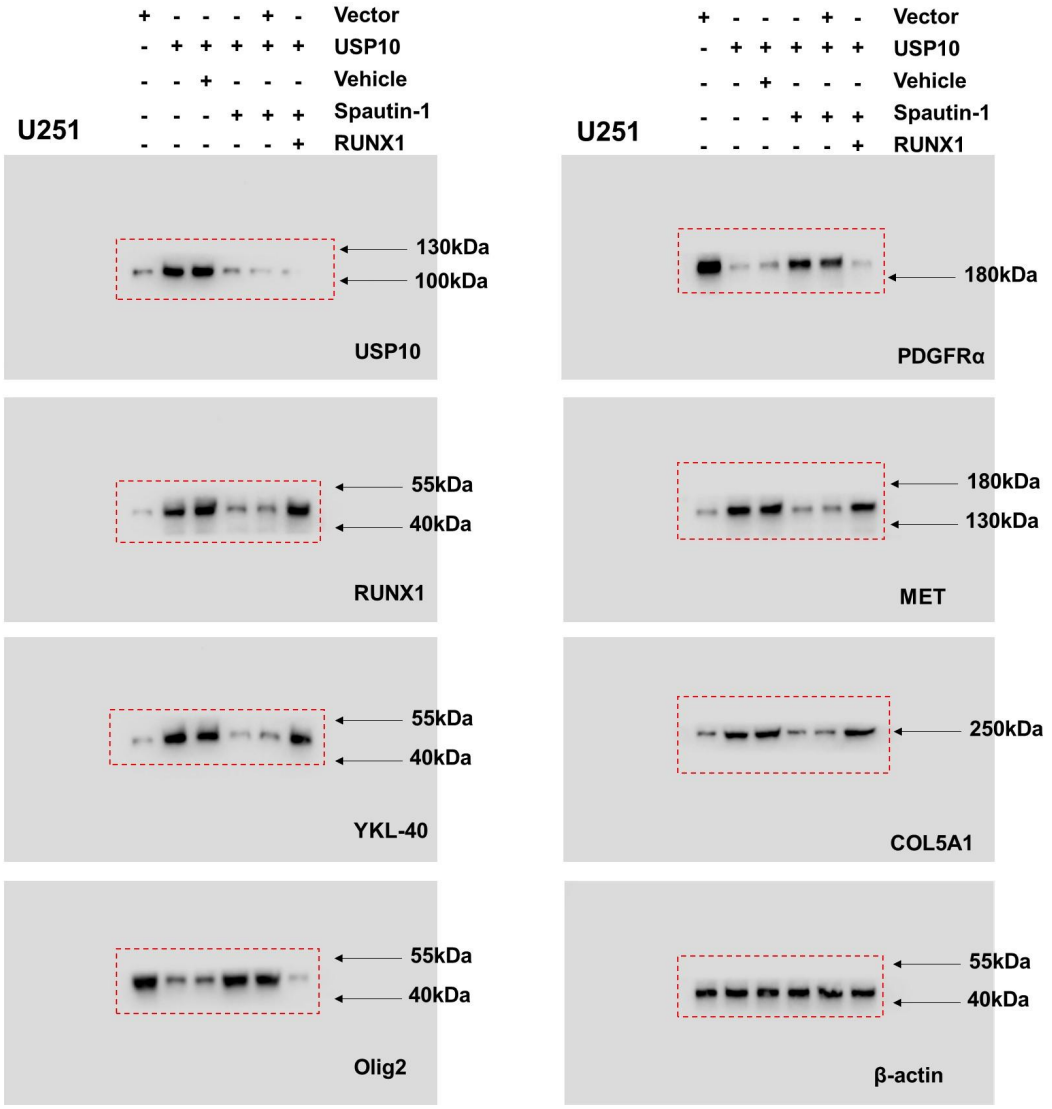

U251
+ - - - + - Vector
- + + + + + USP10
- - + - - - Vehicle
- - - + + + Spautin-1
- - - - - + RUNX1
130kDa
100kDa
USP10
55kDa
40kDa
RUNX1
55kDa
40kDa
YKL-40
55kDa
40kDa
Olig2
U251
+ - - - + - Vector
- + + + + + USP10
- - + - - - Vehicle
- - - + + + Spautin-1
- - - - - + RUNX1
180kDa
PDGFRα
180kDa
130kDa
MET
250kDa
COL5A1
55kDa
40kDa
β-actin

Figure 6F

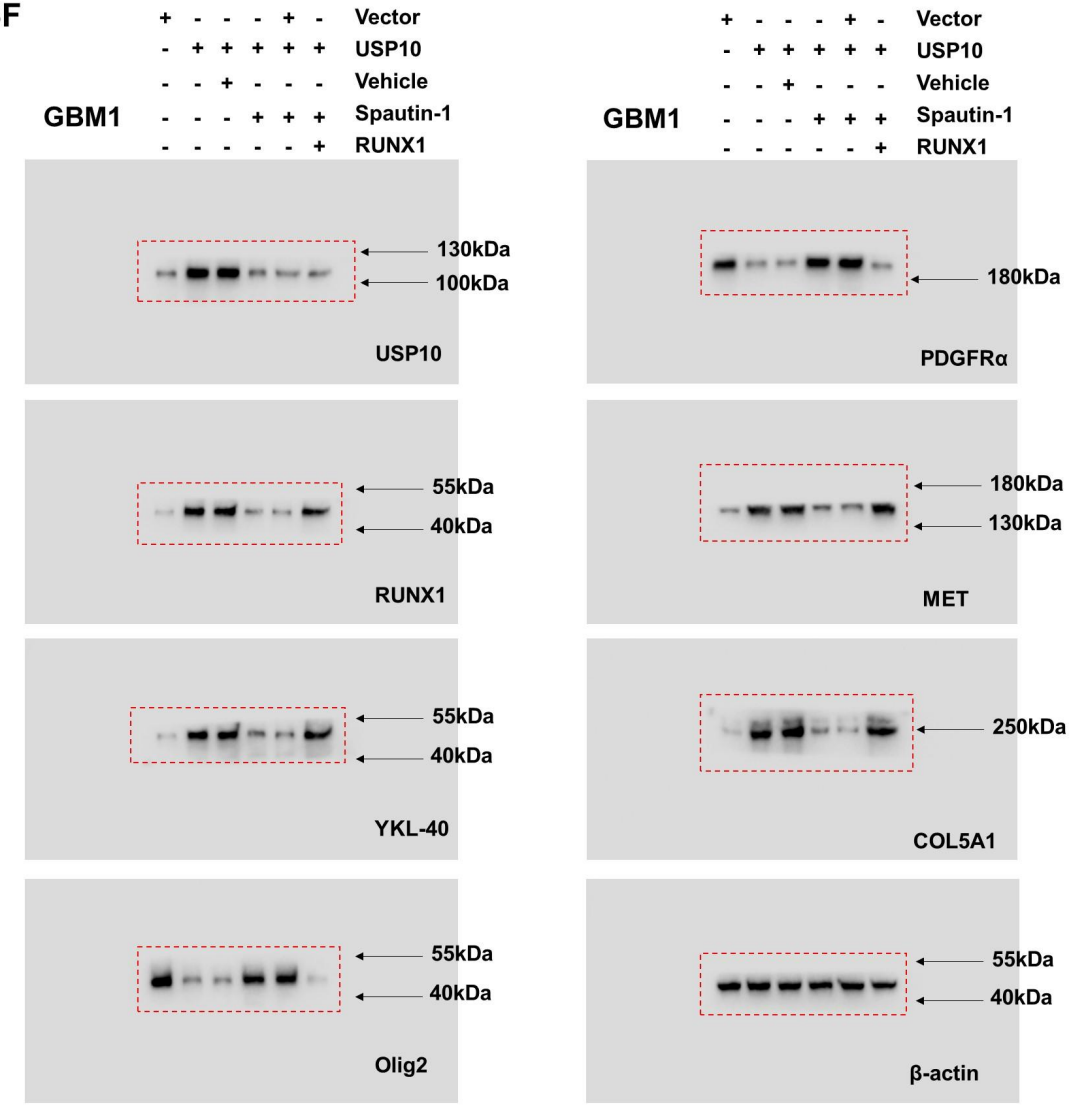
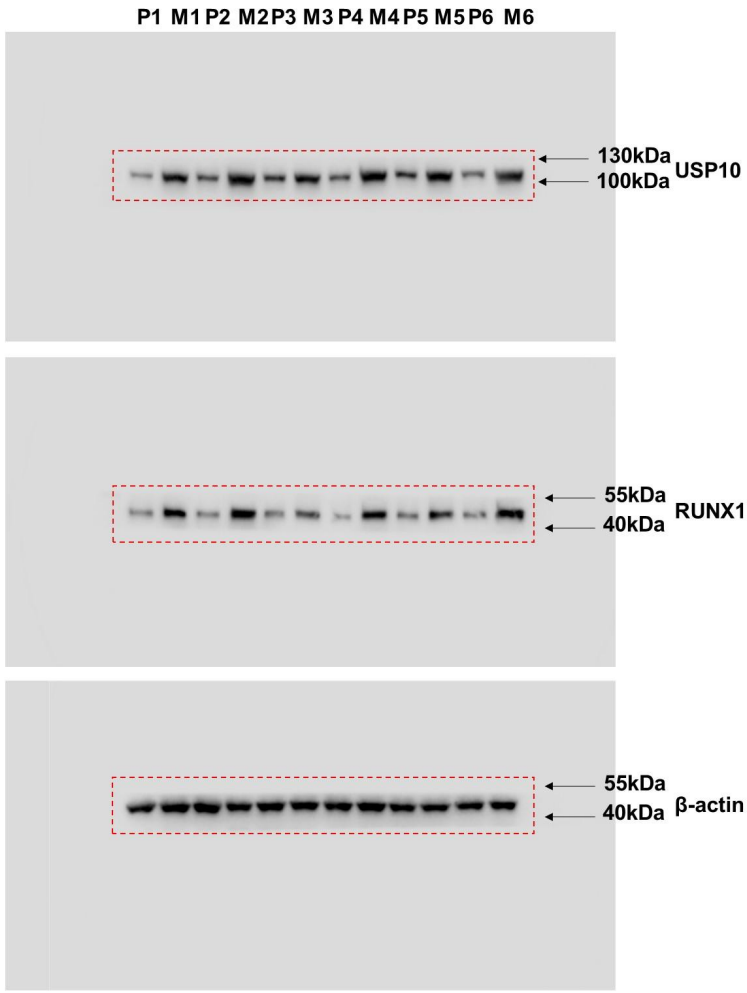
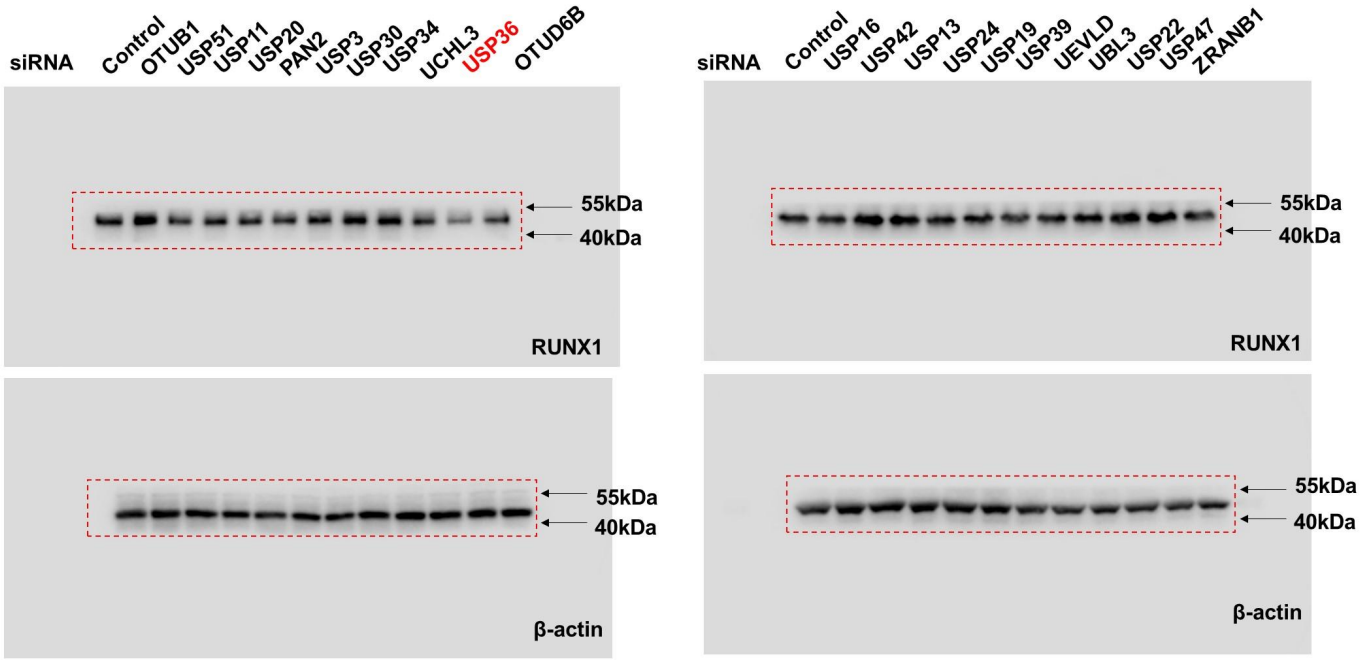

GBM1
+ - - - + - Vector
- + + + + + USP10
- - + - - - Vehicle
- - - + + + Spautin-1
- - - - - + RUNX1
130kDa
100kDa
USP10
55kDa
40kDa
RUNX1
55kDa
40kDa
YKL-40
55kDa
40kDa
Olig2
GBM1
+ - - - + - Vector
- + + + + + USP10
- - + - - - Vehicle
- - - + + + Spautin-1
- - - - - + RUNX1
180kDa
PDGFRα
180kDa
130kDa
MET
250kDa
COL5A1
55kDa
40kDa
β-actin

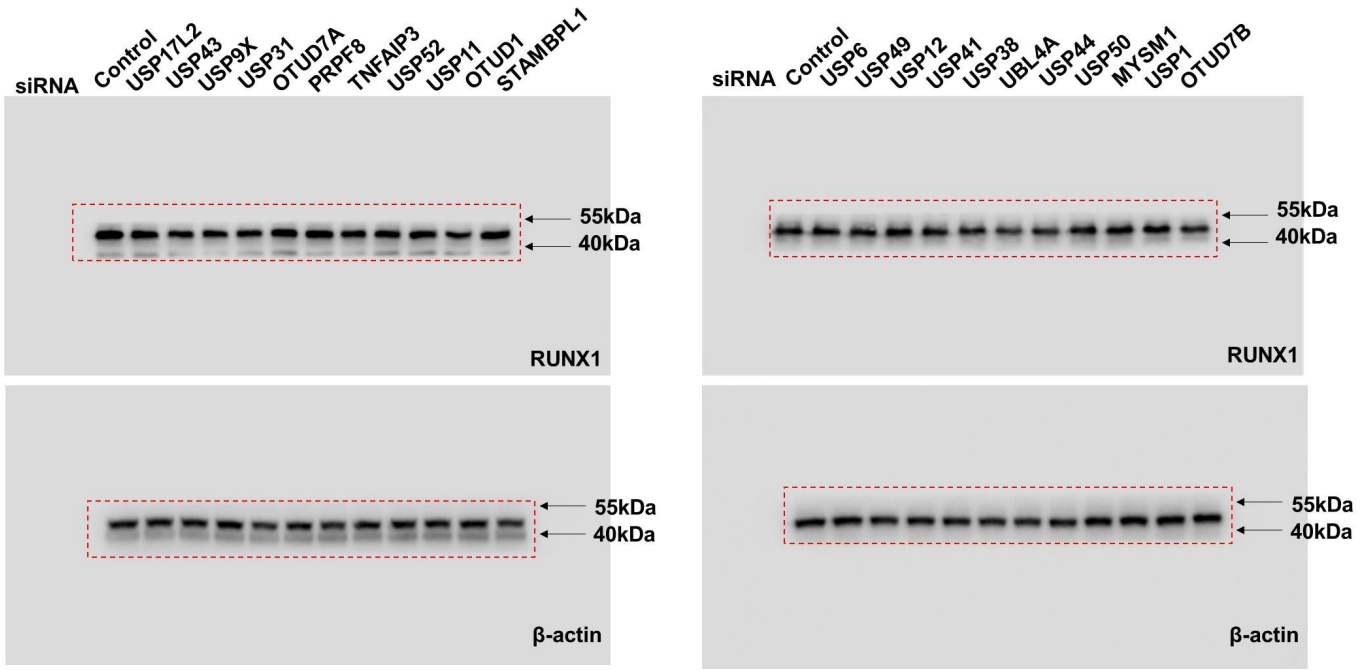
Figure 7B


P1 M1 P2 M2 P3 M3 P4 M4 P5 M5 P6 M6
130kDa
100kDa
USP10
55kDa
40kDa
RUNX1
55kDa
40kDa
β-actin

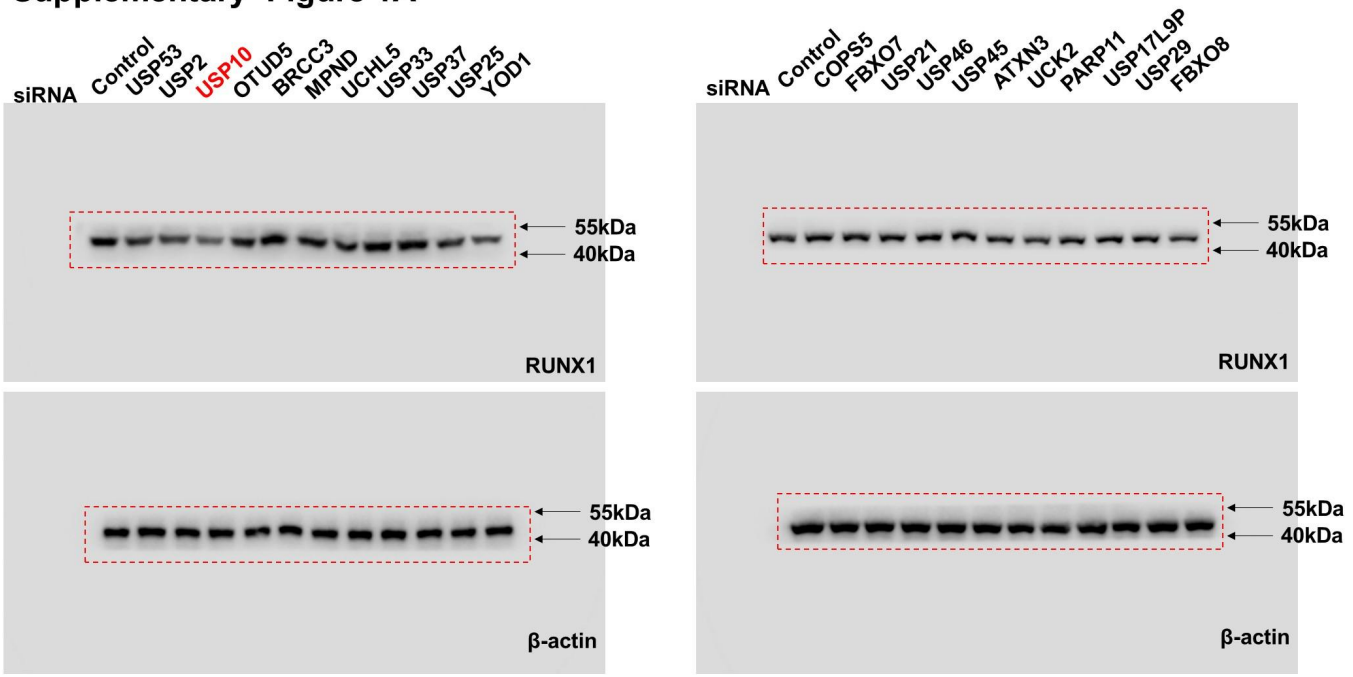
Supplementary Figure 1A



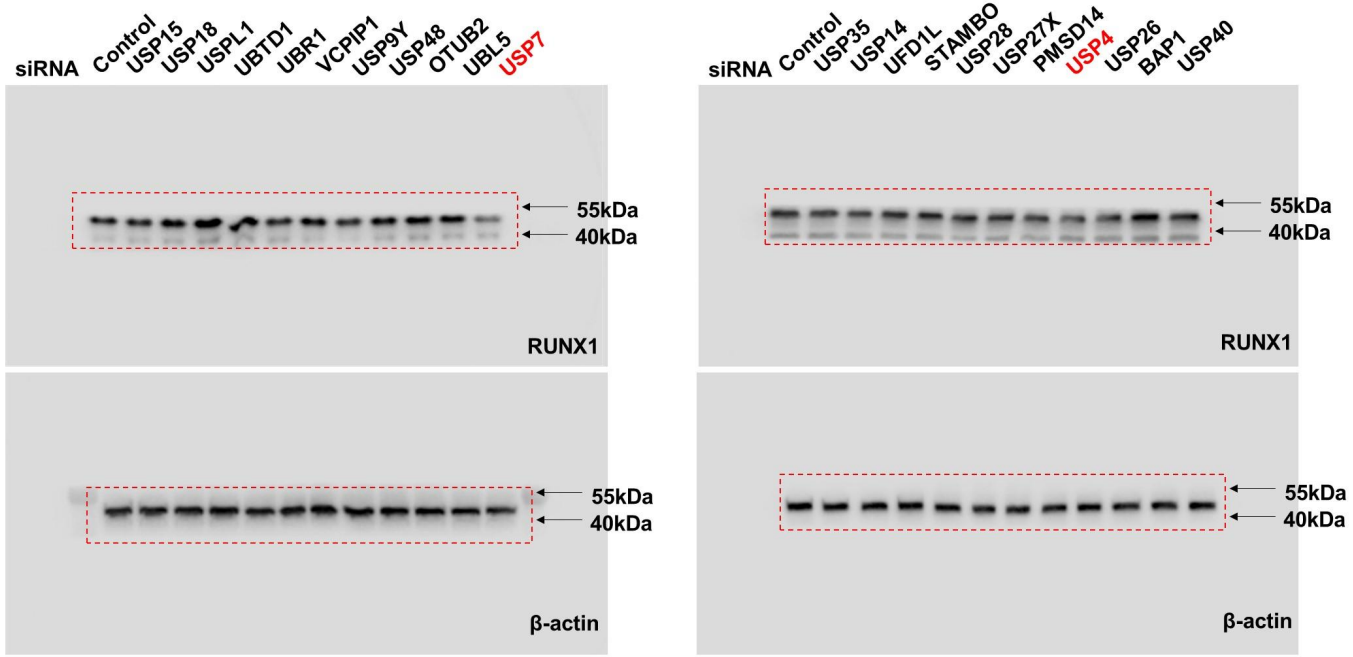
Supplementary Figure 1A



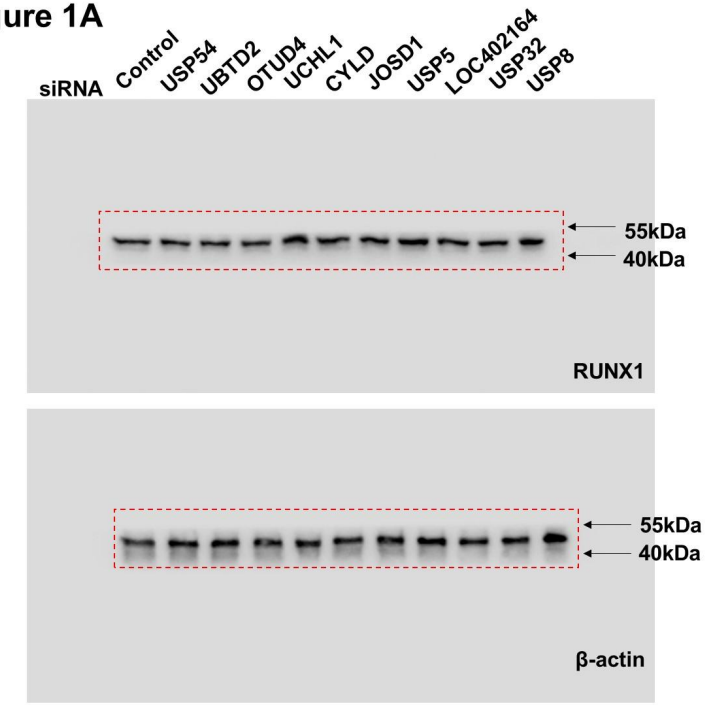
Supplementary Figure 1A



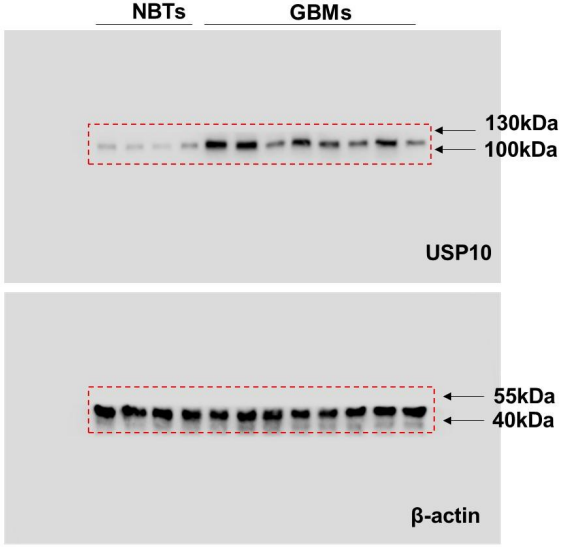
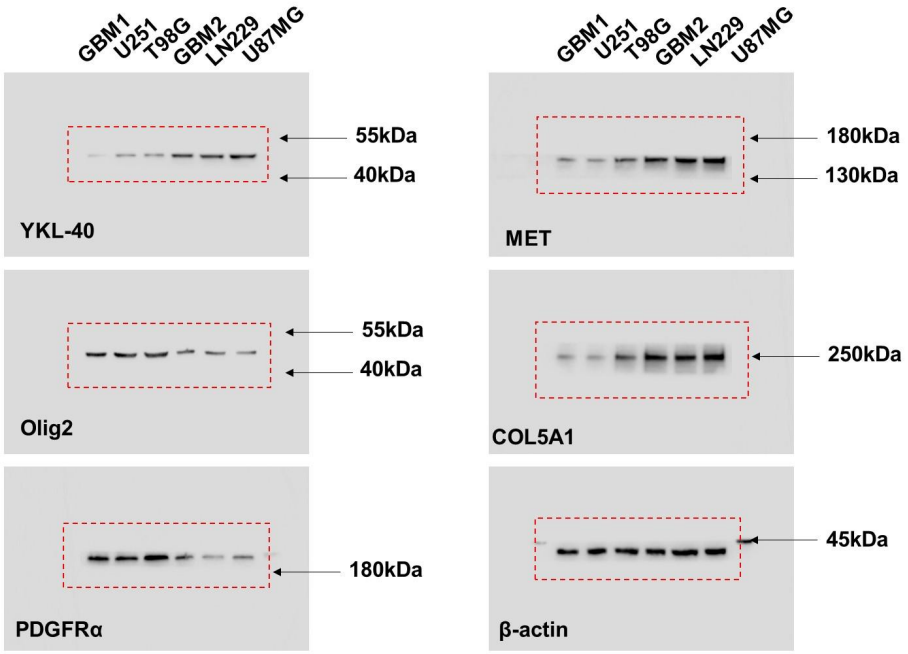
Supplementary Figure 1A



Supplementary Figure 1A



Supplementary Figure 2B



Supplementary Figure 2C