Supplemental Figure Legends

Figure S1. Identification of RanBP5 as interacting protein via mass spectrometry, and Stx3 constructs. (A) Table showing RanBP5 tryptic-digested peptides co-immunoprecipitated with Stx3. Peptides identified by LC-MS/MS. **(B)** Schematic and nomenclature of Stx3 constructs.

Fig. S2. Confirmation of binding to candidate co-activator proteins. GST-Stx3S and Gal4 or Gal4-candidate protein were co-expressed in HEK293T cells and lysates subjected to precipitation via glutathione-coated sepharose. Lysates and bead precipitates were subjected to SDS-PAGE and immunoblotted for Gal4 or GST.

Figure S3. Candidate shRNA oligonucleotides. (A) Alignment of exon 9 - exon 11 junction with candidate shRNA oligonucleotides. Each oligonucleotide is 21bp long and predicted to silence Stx3S specifically. **(B)** Immunoprecipitation and immunoblot of HEK293T cells transduced with lentivirus delivering candidate shRNA oligo as indicated.

Figure S4. Cleaved Caspase-3 staining. (A) Representative immunocytochemistry images of 5-day cultures of SCR or Stx3S KD Caco2 cells stained for cleaved Caspase-3 (green) and DAPI (blue). Scale bar 20μm. **(B)** Cleaved Caspase-3 quantification positive proportion for SCR and Stx3S KD cells. Bars represent the means and SEM of quadruplicate samples.

A

Sequence position	m/z	Peptide sequence
45-53	538.61	ITFLLQAIR
63-70	459.75	QMAAVLLR
111-121	630.81	KICDIAAELAR
112-121	567.08	ICDIAAELAR
242-252	587.25	SLVEIADTVPK
420-439	722.32	YAACNAVGQMQTDFPGFQK
445-460	902.35	VIALLQTMEDQGNQR
500-506	436.65	LQELIQK
560-573	737.95	TIECISLIGLAVGK
682-693	717.07	STACQMLVCYAK
697-708	715.34	EGFVEYTEQVVK
759-778	716.96	AIGTEPDSDVLSEIMHSFAK
965-985	612.92	TKENVNATENCISAVGK

B

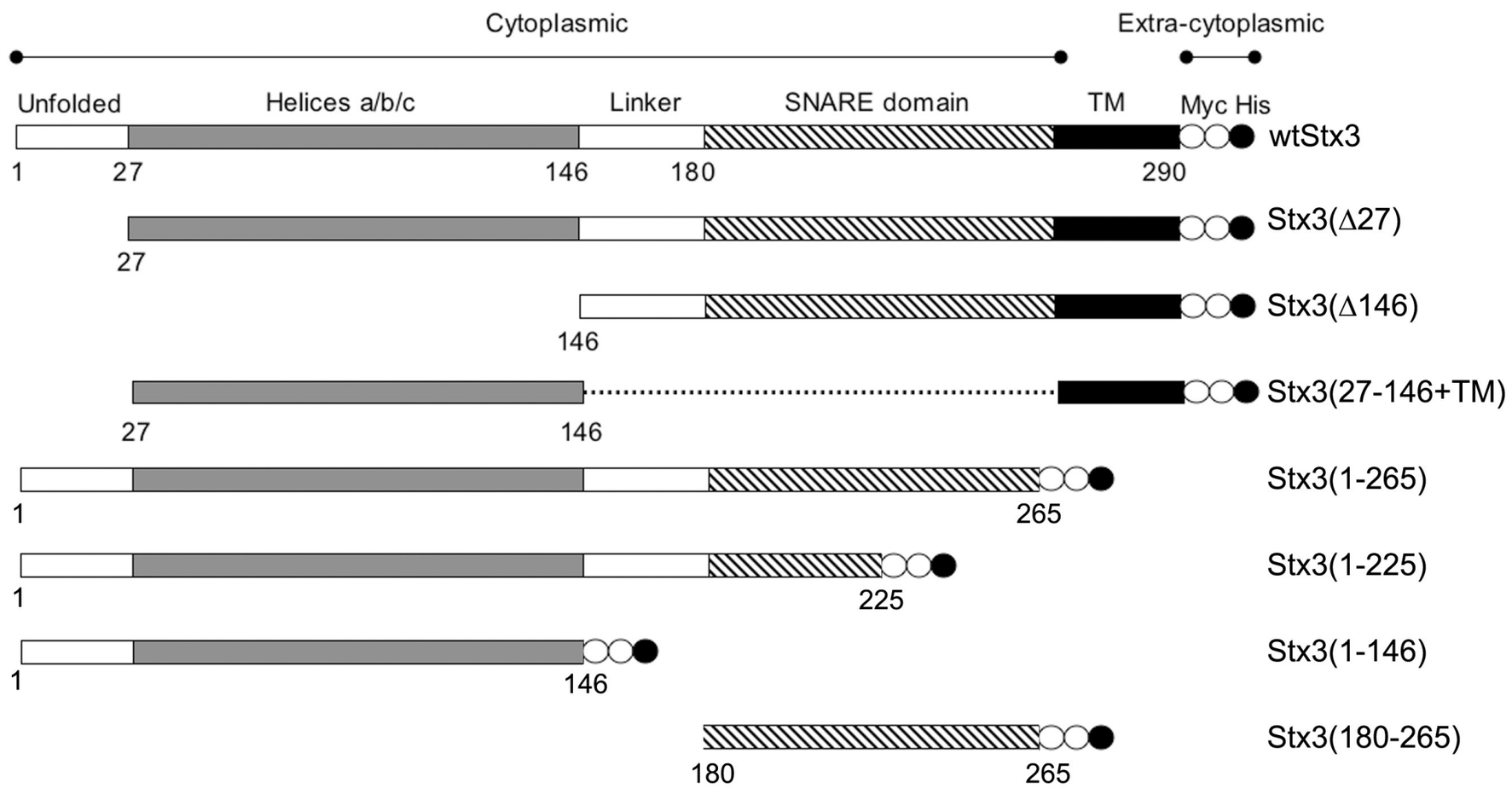

Fig. S1

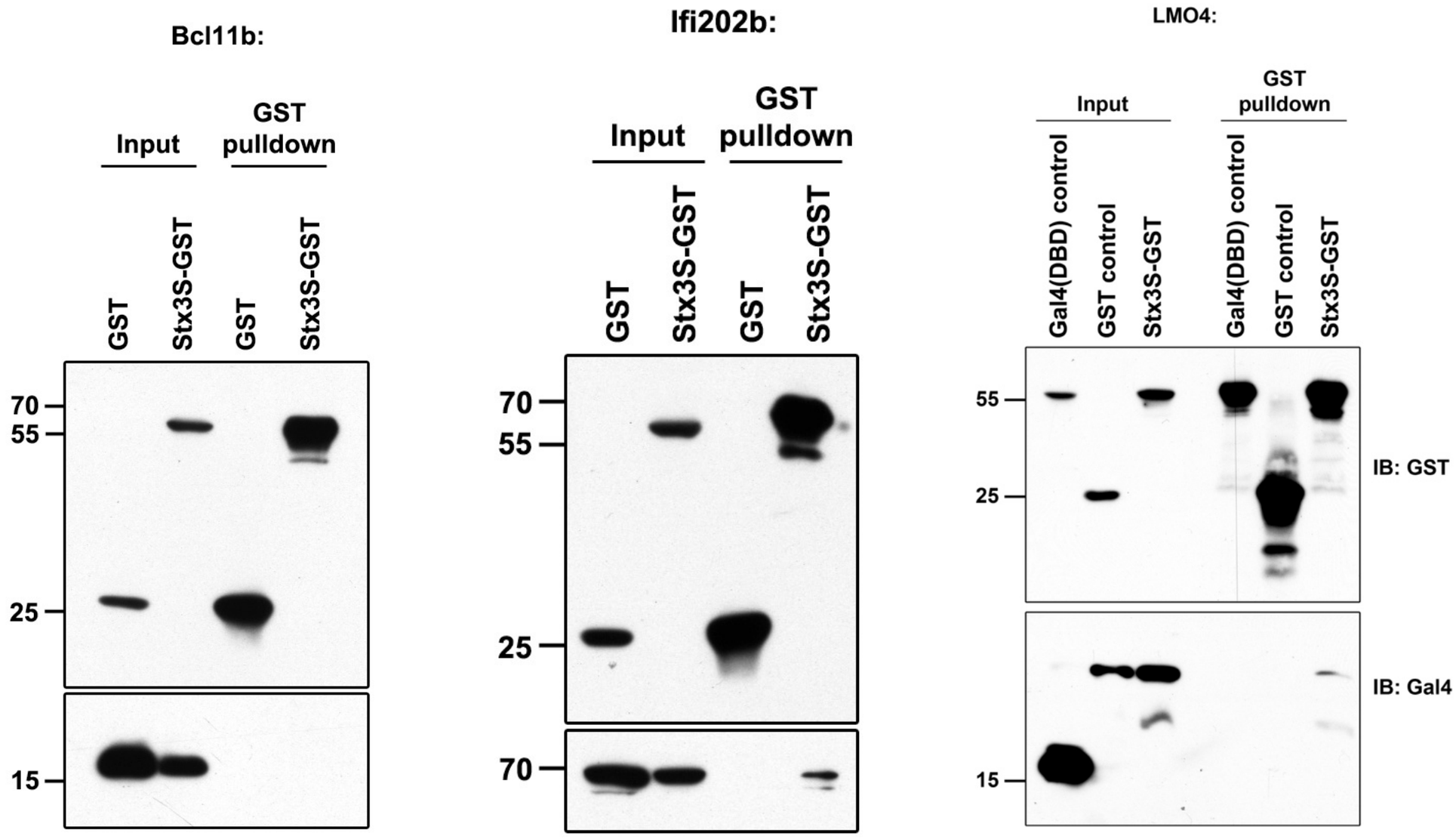
Bcl11b:
Input
GST pulldown
GST
Stx3S-GST
GST
Stx3S-GST
70
55
25
15
Ifi202b:
Input
GST pulldown
GST
Stx3S-GST
GST
Stx3S-GST
70
55
25
70
LMO4:
Input
GST pulldown
Gal4(DBD) control
GST control
Stx3S-GST
Gal4(DBD) control
GST control
Stx3S-GST
55
25
15
IB: GST
IB: Gal4
RybP:
Input
GST pulldown
GST
Stx3S-GST
GST
Stx3S-GST
55
25
35
ZNF496:
Input
GST pulldown
GST
Stx3(1-225)-GST
Stx3S-GST
GST
Stx3(1-225)-GST
Stx3S-GST
55
35
25
IB: GST
100
IB: Gal4

Fig. S2

A

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                                exon 9/exon 11
757                               786787                                    834
  GCTGTGAAATACCAGAGTCAGGCCCGGAAGAAACTGATTTCACTCCAGACTGGTGTGGCCACCCTTGTCTTCAGATGA
                     C1     GCCCGGAAGAAACTGATTTCA
                     C2       CCGGAAGAAACTGATTTCACT
                     C3                                                GCCACCCTTGTCTTCAGATGA
                     C4         GGAAGAAACTGATTTCACTCC
                     C5  CAGGCCCGGAAGAAACTGATT
```

B

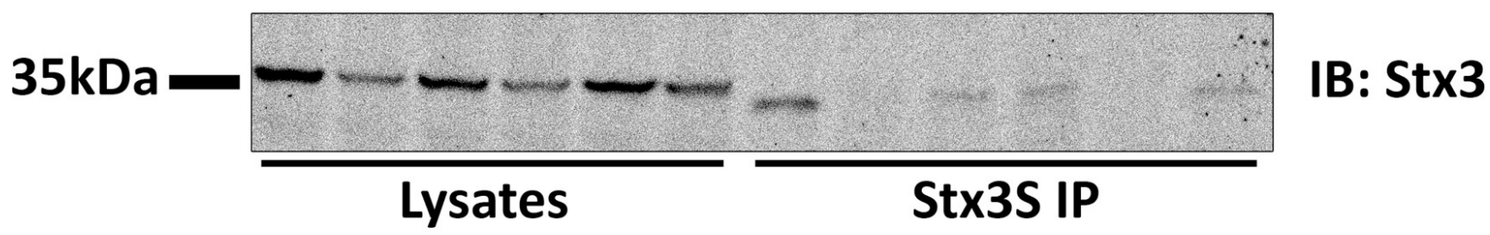

Fig. S3

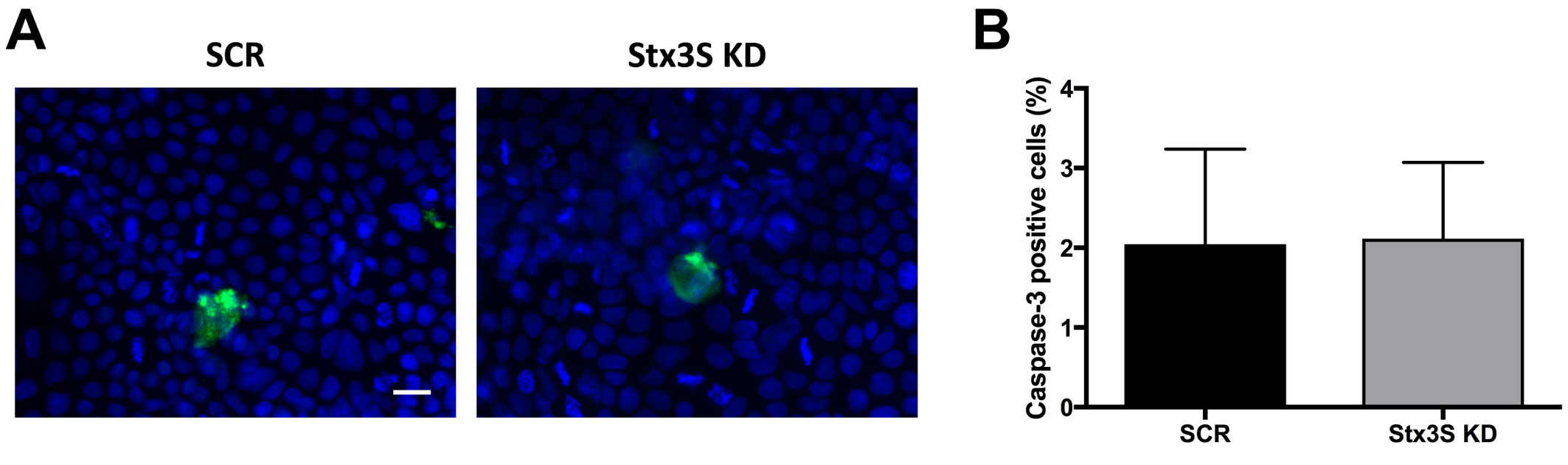

Fig. S4