Supplementary Information.

Supplementary Figure 1 | Identification of KSRP, a conserved nucleo-cytoplasmic protein, as a component of the Dicer complex in 293T cells. a, KSRP was identified in whole cell extracts immunoprecipitated with a mixture of anti-Dicer mAbs[11]. A band corresponding to a protein having a molecular weight of about 75 KDa was cut from a Coomassie-stained gel. Four peptides (indicated in green and red) covering 7.4 % of the entire sequence of KSRP (708 residues) were identified in two independent experiments by LC-MSMS. **b**, KH domains 1 to 4 of KSRP are highly conserved in different species (hsa, homo sapiens; mmu, mus musculus; xla, xenopus laevis; dra, danio rerio). **c**, immunofluorescence analysis of 293T cells stained with anti-KSRP antibody. **d**, Immunoblot analysis of either cytoplasmic or nuclear extracts from HeLa cells using antibodies directed to the indicated proteins.

Supplementary Figure 2 | Effectiveness of siRNA-mediated knock-down of select proteins in HeLa cells. Immunoblot analysis of total extracts from HeLa cells transiently transfected with either Luciferase siRNA (siCtrl) or siRNAs directed to distinct transcripts (as indicated). **a**, anti-Dicer and anti-β-tubulin immunoblots of HeLa cell extracts upon Dicer knock-down. **b**, anti-KSRP, anti-Dicer, anti-Drosha, and anti-β-tubulin immunoblots of HeLa cell extracts upon KSRP knock-down. **c**, anti-KSRP and anti-β-tubulin immunoblots of NIH-3T3 cell extracts upon transient KSRP knock-down. **d**, anti-AUF1 and anti-β-tubulin immunoblots of HeLa cell extracts upon AUF1 knock-down. Asterisk marks an anti-AUF1 cross-reacting band. **e**, anti-KSRP and anti- α-tubulin immunoblots of 293T cell extracts upon KSRP immunodepletion.

Supplementary Figure 3 | Analysis of KSRP—TL-let-7a-1 interaction. a, The interaction of KSRP as well as the indicated KSRP deletion mutants (see

schematic representation above) with radiolabeled pre-let-7a-1 was evaluated by UV-crosslinking. **b**, KH3-4 (40-200 nM) binds to TL-let-7a-1 while KH1-2 (40-200 nM) does not. **c-e,** Amide chemical shift changes versus RNA/protein ratio in a KH3-4—TL-let-7a-1 (**c**), KH3—TL-let-7a-1 (**d**), and KH4—TL-let-7a-1 titration experiments (**e**). K_ds for the complexes are 50 nM±40 nM, 600 nM±100 nM, and 40 μM ± 5 μM, respectively. **f**, TL-let-7a-1–binding surface of KH3 when isolated (left and center, 180° rotated) and within KH3-4 (right, oriented as in left) as defined by backbone amide Chemical Shift Perturbation NMR assays. Affected residues are in blue, the GXXG tetraloop is in yellow. **g**, Superimposition of ^{15}N-^{1}H HSQC spectra of KH3 free (red) and bound to TL-let-7a-1 (blue) and pre-let-7a-1 (green). The area shown is the same displayed in the blow-up of figure 1f. The KH3 resonances are in the same position, in the TL-let-7a-1-bound and the pre-let-7a-1-bound protein. Arrows highlight the shift of a few selected peaks in the core of the RNA-binding groove.

Supplementary Figure 4 | a, Northern blot analysis of total RNA from HeLa cells transfected as indicated. **b**, KSRP knock-down reduces the effect of either pri-let-7a-1 or pre-let-7a-1 on pGL3-let-7a6XBS activity while does not affect the activity of pre-miR-23b on pGL3-miR-23b3XBS in transfected NIH-3T3 cells. ** p-value < 0.01 (Student's t-test). **c**, Pre-let-7a-1 processing by 293T cell extracts is reduced by KSRP immunodepletion. **d**, KSRP immunodepletion does not affect the stability of let-7a. **e**, **f**, **g**, KSRP coimmunoprecipitates with pre-let-7a processing activity in 293T cells and specificity was established because either immunoprecipitation of extract from Flag-KSRP transfected cells with control IgG (cIgG) or immunoprecipitation of extract from Flag-p37AUF1—transfected cells with anti-Flag failed to produce any processing. All data are presented as mean ± s.d. (n=3).

Supplementary Figure 5 | KSRP specifically regulates the expression of select miRNAs in two cell lines. a, Human miRNAs whose expression was

reduced by more than 1.5 fold (p-value < 0.05, calculated with a bootstrapping method[34]) upon KSRP knock-down in HeLa cells. **b**, **c**, Total RNA from HeLa treated with either luciferase siRNA (siCtrl) or KSRP siRNA (siKSRP) was analysed by Northern blotting with specific probes for detection of select miRNAs or U6 snRNA, as indicated in the figures. **d**, anti-KSRP and anti-β-tubulin immunoblots of NIH-3T3 cell extracts upon stable KSRP knock-down. **e**, Total RNA from NIH-3T3 cells either mock-transfected or stably expressing shKSRP was analysed by Northern blot using the specific probes indicated in the figure. Rehybridazion with a probe detecting U6 snRNA was performed as loading control.

Supplementary Figure 6 | KSRP interacts with the TL of pre-miR-21 (TL-miR-21) and pre-Let-7a-1 (TL-let-7a-1) but not with the TL of pre-miR-23b (TL-miR-23b). a, The interaction of KSRP (40-400 nM) with radiolabeled TL-let-7a-1 or TL-miR-23b was assessed by UV-crosslinking (left panel). The UV-crosslinking reactions were subjected to immunoblot with anti-KSRP (right panel). **b**, The interaction of either GST-KH1-4 (40-400 nM) or GST-p37AUF1 (200 nM) with radiolabelled TL-let-7a-1 or TL-miR-21 was assessed by UV-crosslinking (left panel). The UV-crosslinking reactions were subjected to immunoblot with anti-GST (right panel). **c**, Pre-miR-23b processing by 293T cell extracts is not affected by KSRP immunodepletion. Chemically synthesised pre-miR-23b was 5' end ^{32}P-labeled. **d**, The interaction of KSRP (50-300 nM) with either wild-type (WT) TL-miR-21 or two distinct mutants (top panel) was measured by gel mobility shift assays (bottom panel). **e**, KSRP knock-down does not influence the effect of pre-miR-23b on pGL3-miR-23b3XBS activity in transfected HeLa cells. Cells were transiently co-transfected with pGL3-miR-23b3XBS reporter together with either control siRNA, siKSRP or siDicer in the absence or in the presence of a shRNA-based plasmid expressing pre-miR-23b. ** p-value < 0.01 (Student's t-test). All data are presented as mean ± s.d. (n=4).

Supplementary Figure 7 | Evidence suggesting an involvement of KSRP in pri-miRNA processing. a, Comparison of the ratio between pre-miRNA and mature miRNA levels in control, KSRP knock-down or Dicer knock-down HeLa cells. HeLa cells were transiently transfected with either luciferase (siCtrl), or KSRP or Dicer siRNAs. RNA was analysed by Northern blot and the intensity of the bands quantitated using PhosphorImager (Storm 860, Molecular Dynamics). The ratio between the signal intensity of the band corresponding to either the pre-miRNAs or the mature miRNAs was calculated using the ImageQuant program (Version 1.2, Molecular Dynamics). **b**, Total RNA was extracted from HeLa cells transfected with either control (lane 1), or Dicer (lane 2), or KSRP (lane 3) siRNAs. miR-21 is included in the list of miRNAs regulated upon KSRP knock-down presented in Supplementary Table I. Semi-quantitative RT-PCR for the detection of the indicated pri-miRNAs as well as of GAPDH was performed. **c**, KSRP does not interact with pri-miR-24 and pri-miR-17. HeLa total cell extracts were immunoprecipitated as indicated and the RNA analysed by qPCR. Pri-miR-21 served as the positive control. ** p-value < 0.01 (Student's t-test). All data are presented as mean ± s.d. (n=3).

Supplementary Figure 8 | KSRP specifically interacts with pri-let-7a-1. a, KSRP is one of the major proteins interacting with pri-let-7a-1 as evaluated in UV-crosslinking (left panel). Anti-KSRP immunoblot of the UV-crosslinking is presented on the right. **b,** The interaction of KSRP (40-400 nM) with radiolabeled pri-let-7a-1 was assessed by UV-crosslinking. **c**, The interaction of GST-p37AUF1 (400 nM) with either prothymosin 3'UTR RNA (lane 1, PTMA 3'UTR[16]) or pri-let-7a-1 was assessed by UV-crosslinking (left panel). The UV-crosslinking reactions were subjected to immunoblotting analysis with anti-GST antibody (right panel).

Supplementary Figure 9 | KSRP affects the in vitro processing of pri-let-7a-1. a, KSRP coimmunoprecipitates with pri-let-7a-1 processing activity. **b**, Total extracts from either mock-transfected or shKSRP stably transfected 293T cells

were analysed by immunoblot using the indicated antibodies (left panel). In vitro processing of either ^{32}P internally-labeled pri-let-7a-1 (middle panel) or ^{32}P internally-labeled pri-miR-23b (right panel) by total extracts from either mock-transfected or shKSRP stably transfected 293T cells. **c**, In vitro processing of ^{32}P internally-labeled pri-let-7a-1 RNA by the above indicated cell extracts. **d**, In vitro processing of ^{32}P internally-labeled pri-let-7a-1 RNA by total extracts from either mock-transfected or shKSRP stably transfected NIH-3T3 cells. **e**, Immunoblot analysis of total extracts from either mock- or Flag-KSRP transiently transfected 293T cells.

Supplementary Figure 10 | a, Association of DGCR8 to pri-miRNAs is not affected by KSRP knock-down. Total cell extracts from HeLa cells transiently transfected with either control (siCtrl) or KSRP siRNA were immunoprecipitated with the indicated antibodies. RNA was extracted from immunocomplexes and analysed by RT-PCR. A 1% input of the immunoprecipitated lysates was also analysed. **b**, HeLa cells were transfected with either double-strand control RNA (open bars) or double strand let-7a (black bars). Total RNA was prepared and analysed by qPCR. ** p-value < 0.01 (Student's t-test). **c, d**, KSRP knock-down inhibits the let-7a-dependent reduction of NRAS (**c**) and MYC (**d**) mRNAs. ** p-value < 0.01(Student's t-test). All data are presented as mean ± s.d. (n=4).

Supplementary Figure 11 | KSRP knock-down affects pri-Let-7a-1—induced antiproliferative effect and pri-miR-16-1—induced apoptotic effect in U2OS osteosarcoma cells. a, KSRP knock-down impairs pri-let-7a-1—mediated antiproliferative effect while does not affect mature let-7a effect as evaluated by BrdU incorporation in U2OS cells. **b**, KSRP knock-down impairs pri-miR-16-1—mediated pro-apoptotic effect while does not affect mature miR-16-1 effect as evaluated by Tunel assay in U2OS cells. **c**, Quantitation of four independent Tunel assays (including that presented in panel b). ** p-value < 0.01 (Student's t-test). All data are presented as mean ± s.d. (n=4).

Supplementary Figure 12 | KSRP affects the maturation of miRNAs involved in C2C12 myoblasts differentiation, inhibits the down-regulation of miR-206 direct target mRNAs, and inhibits serum withdrawal-induced cell differentiation. **a,** Northern blot analysis of total RNA from either mock or shKSRP stably transfected C2C12 myoblasts (shKSRP C2C12) cultured in either growth medium (GM) or differentiation medium (DM). **b**, KSRP knock-down reduces the effect of either pri-miR-1-2 or pre-miR-1-2, but not of mature miR-1, on pGL3-miR1-3XBS activity in transfected HeLa cells. Asterisk, p value < 0.05 (Student's t-test). **c**, Total RNA was extracted from either mock or shKSRP C2C12 cultured in either GM or DM and semi-quantitative RT-PCR for the detection of the indicated pri-miRNAs was performed. Asterisks mark unreacted primers. **d**, KSRP interacts with pri-miRNAs involved in myoblasts differentiation as evaluated by RNA immunoprecipitation analysis. Total cell extracts were immunoprecipitated as indicated, RNA was purified and analysed by qPCR using primers specific for the indicated pri-miRNAs. ** p value < 0.01 (Student's t-test). **e**, Immunoblot analysis of total extracts from either mock or shKSRP C2C12 cultured in either GM or DM using the indicated antibodies. **f**, KSRP knock-down impairs the ability of C2C12 myoblasts to form multinucleated myotubes upon shift to DM. All data are presented as mean ± s.d. (n=4).

Supplementary Figure 13 | a, coimmunoprecipitation of endogenous KSRP with Flag-Dicer and Flag-TRBP2 is insensitive to RNaseA treatment, while coimmunoprecipitation with Flag-Exp5 is partly RNaseA sensitive. Asterisk marks non-specific immunoreactivity. **b**, coimmunoprecipitation of endogenous KSRP with either Flag-Drosha or Flag-DGCR8 is insensitive to RNaseA treatment. Anti-Flag immunoblot analysis of total cell extracts from HeLa cells transfected with either Flag-Drosha or Flag-DGCR8 and immunoprecipitated with the indicated antibodies. **c**, coimmunoprecipitation of endogenous KSRP with Flag-Dicer is insensitive to RNase V1 (1 U/ml) treatment. Anti-Flag immunoblot analysis of total cell extracts from HeLa cells transfected with Flag-Dicer and immunoprecipitated with the indicated antibodies.

Supplementary Figure 14 | Quantitative RT-PCR analysis of either pri-let-7a-1 or pri-miR-23b present in immunocomplexes upon precipitation of Flag-Drosha-transfected 293T cells with either pre-immune serum (P.I.) or anti-KSRP antibody (first I.P., top left panel). Supernatants of the first I.P. were subjected to a second precipitation with anti-Flag antibody and immunocomplexes were analysed by quantitative RT-PCR for the presence of either pri-let-7a-1 or pri-miR-23b (second I.P., top right panel). Quantitative RT-PCR analysis of either pre-let-7a-1 or pre-miR-23b present in immunocomplexes upon precipitation of 293T cells with either pre-immune serum (P.I.) or anti-KSRP antibody (first I.P., bottom left panel). <200 nt long RNAs were purified using the 'PureLink miRNA isolation kit' Invitrogen. Supernatants of the first I.P. were subjected to a second precipitation with anti-Dicer antibody and immunocomplexes were analysed by quantitative RT-PCR for the presence of either pre-let-7a-1 or pre-miR-23b upon small RNA enrichment by using the 'PureLink miRNA isolation kit' Invitrogen (second I.P., bottom right panel). * p value < 0.05, ** p value < 0.01 (Student's t-test). All data are presented as mean ± s.d. (n=3).

Supplementary Table I

MicroRNAs whose expression levels were reduced between 1.5 and 1.2 fold by KSRP knock-down in HeLa cells.

MicroRNAs	Sanger Accession number
Hsa-mir-106a	MI0000113
Hsa-mir-125a	MI0000469
Hsa-mir-125b	MI0000446 – 470
Hsa-mir-15a	MI0000069
Hsa-mir-16	MI0000070 – 115
Hsa-mir-20a	MI0000076
Hsa-mir-20b	MI0001519
Hsa-mir-21	MI0000077
Hsa-mir-25	MI0000082
Hsa-mir-26a	MI0000083 – 750
Hsa-mir-27b	MI0000440
Hsa-mir-30a	MI0000088
Hsa-mir-30c	MI0000736 – 254
Hsa-mir-30d	MI0000255
Hsa-mir-320	MI0000542
Hsa-mir-335	MI0000816
Hsa-mir-483	MI0002467

MicroRNAs whose expression levels was not affected by KSRP knock-down in HeLa cells.

MicroRNAs	Sanger Accession number
Hsa-mir-100	MI0000102
Hsa-mir-101	MI0000103
Hsa-mir-103	MI0000108 – 9
Hsa-mir-106b	MI0000734
Hsa-mir-107	MI0000114
Hsa-mir-10a	MI0000266
Hsa-mir-10b	MI0000267
Hsa-mir-122a	MI0000442
Hsa-mir-126	MI0000471
Hsa-mir-128a	MI0000447
Hsa-mir-128b	MI0000727
Hsa-mir-130a	MI0000448
Hsa-mir-130b	MI0000748

Hsa-mir-132	MI0000449
Hsa-mir-135	MI0000452 – 3
Hsa-mir-137	MI0000454
Hsa-mir-138	MI0000476 – 455
Hsa-mir-140	MI0000456
Hsa-mir-143	MI0000459
Hsa-mir-145	MI0000461
Hsa-mir-148b	MI0000811
Hsa-mir-149	MI0000478
Hsa-mir-151	MI0000809
Hsa-mir-152	MI0000462
Hsa-mir-154	MI0000480
Hsa-mir-17	MI0000071
Hsa-mir-181a	MI0000289 – 269
Hsa-mir-181b	MI0000270
Hsa-mir-181d	MI0003139
Hsa-mir-183	MI0000273
Hsa-mir-185	MI0000482
Hsa-mir-18a	MI0000072
Hsa-mir-193b	MI0003137
Hsa-mir-195	MI0000489
Hsa-mir-196b	MI0001150
Hsa-mir-197	MI0000239
Hsa-mir-198	MI0000240
Hsa-mir-199a	MI0000242 – 281
Hsa-mir-19a	MI0000073
Hsa-mir-19b	MI0000074 – 75
Hsa-mir-200c	MI0000650
Hsa-mir-203	MI0000283
Hsa-mir-210	MI0000286
Hsa-mir-217	MI0000293
Hsa-mir-218	MI0000294 – 295
Hsa-mir-22	MI0000078
Hsa-mir-221	MI0000298
Hsa-mir-222	MI0000299
Hsa-mir-23a	MI0000079
Hsa-mir-23b	MI0000439
Hsa-mir-24	MI0000080 – 81
Hsa-mir-27a	MI0000085
Hsa-mir-29a	MI0000087
Hsa-mir-29b	MI0000105 – 107
Hsa-mir-30b	MI0000441
Hsa-mir-30e	MI0000749
Hsa-mir-31	MI0000089
Hsa-mir-326	MI0000808
Hsa-mir-337	MI0000806
Hsa-mir-340	MI0000802
Hsa-mir-342	MI0000805
Hsa-mir-34a	MI0000268
Hsa-mir-365	MI0000767 – 769
Hsa-mir-371	MI0000779

Hsa-mir-372	MI0000780
Hsa-mir-379	MI0000787
Hsa-mir-382	MI0000790
Hsa-mir-423	MI0001445
Hsa-mir-452	MI0001733
Hsa-mir-484	MI0002468
Hsa-mir-503	MI0003188
Hsa-mir-574	MI0003581
Hsa-mir-581	MI0003588
Hsa-mir-582	MI0003589
Hsa-mir-590	MI0003602
Hsa-mir-594	MI0003606
Hsa-mir-638	MI0003653
Hsa-mir-643	MI0003658
Hsa-mir-651	MI0003666
Hsa-mir-656	MI0003678
Hsa-mir-660	MI0003684
Hsa-mir-663	MI0003672
Hsa-mir-801	MI0005202
Hsa-mir-7	MI0000263 - 264 – 265
Hsa-mir-92b	MI0003560
Hsa-mir-93	MI0000095
Hsa-mir-99a	MI0000101
Hsa-mir-99b	MI0000746

Supplementary Table II

Oligonucleotides used for RT-PCR, cloning and Northern blot analysis of U6 RNA.

	Forward primer	Reverse primer
Hsa.pri-miR-21	5'-TACCATCGTGACATCTCCA-3'	5'-CAGACAGAAGGACCAGAGTT-3'
Hsa.pri-let-7a	5'-GATTCCTTTTCACCATTCACCCTGGATGTT-3'	5'-TTTCTATCAGACCGCCTGGATGCAGACTTT-3'
Hsa.pri-miR-23b	5'-CAGTGTGTGCAGACAGCAC-3'	5'-GTTCTCCAATCTGCAGTGA-3'
Hsa.CMYC	5'-TCCTCAAGAGGTGCCACG-3'	5'-TCGGTTGTTGCTGATCTGTC-3'
Hsa.NRAS	5'-TCTCAGAATAACTACCTCCTCAC-3'	5'-AGCTCAAGACACTGTTTTCAATAG-3'
Mmu.miR-206	5'-CCCAACAAGCTCTGCCTG-3'	5'-GGGAGCATAGTTGACCTGAAAC-3'
Mmu.miR-1-1	5'-ACCAAGTGTGCATGTGTGAGA-3'	5'-TTCAGTGTGCACAAGAACAGG-3'
Mmu.miR-1-2 (q-PCR)	5'-CACTGGATCCATTACTCTTC-3'	5'-ATGTTAGTTTTCCCAGTGAATGGCTGGTCC-3'

Mmu.miR-1-2 (cloning)	5’-TCAGAGCACATACTTCTTTA-3’	5’-CAAAATACATACTTCTTTA-3’
Hsa.pri-let-7a (cloning)	5’-TACAGACTTTATCTCTAAATTAATTTA-3’	5’-ATTCCTTTTCACCATTCACCCT-3’
Hsa.pri-miR-23b (cloning)	5’-CAGACAGCACGGGGTGGCG-3’	5’-AGCTCTTCTTTGGAAACAAAAGA-3’
Hsa.pre-let-7a (q-PCR)	5’-TGAGGTAGTAGGTTGTATAGT-3’	5’-TGTATAGTTATCTCCCAGTG-3’
Hsa.pre-miR-21 (q-PCR)	5’-TAGCTTATCAGACTGATGTTGA-3’	5’-CGACTGGTGTTGCCATGAG-3’
Hsa.pre-miR-23b (q-PCR)	5’-TGGGTTCCTGGCATGCTG-3’	5’-GCAATGTGATTTTAATCTT-3’
U6		5’-CGTTCCAATTTTAGTATATGTGCTGCCGAAGCGAGCAC-3’
Hsa.pri-miR-24	5’-CGGTGAACTCTCTCTTGTAT-3’	5’-CTCGGGCACTTACAGACAC-3’
Hsa.pri-miR-17	5’-GTTGTTAGAGTTTGAGGTGTT-3’	5’-AGCACTCAACATCAGCAGG-3’
Mmu.pri- -let7-g	5’-GTCAAGATCTCGTTTCCTTTTGCCTGATTCCAGGCTGA-3’	5’-GTCACTCGAGGGCAGCTGGCGCGCTGTTCCTGGC-3’

a

LC-MSMS analysis of Dicer co-immunoprecipitates from HEK293 cells

Peptides identified in experiment #1 in **RED**
Peptides identified in experiment #2 in **GREEN**

MSDYSTGGPP PGPPPPAGGG GGAGGAGGGP PPGPPGAGDR GGGGPCGGGP GGGSAGGPSQ PPGGGGPGIR KDAFADAVQR ARQIAAKIGG

DAATTVNNST PDFGFGGQKR QLEDGDQPES KKLASQGDSI SSQLGPIHPP PRTSMTEEYR VPDGMVGLII GRGGEQINKI QQDSGCKVQI

SPDSGGLPER **SVSLTGAPES VQKAKMMLDD IVSR**GRGGPP GQFHDNANGG QNGTVQEIMI PAGKAGLVIG KGGETIKQLQ ERAGVKMILI

QDGSQNTNVD KPLRIIGDPY KVQQACEMVM DILRERDQGG FGDRNEYGSR IGGGIDVPVP RHSVGVVIGR SGEMIKKIQN DAGVRIQFKQ

DDGTGPEKIA HIMGPPDRCE HAAR**IINDLL QSLR**SGPPGP PGGPGMPPGG RGRGRGQGNW GPPGGEMTFS IPTHKCGLVI GRGGENVKAI

NQQTGAFVEI SRQLPPNGDP NFKLFIIRGS PQQIDHAKQL IEEKIEGPLC PVGPGPGGPG PAGPMGPFNP GPFNQGPPGA PPHAGGPPPH

QYPPQGWGNT YPQWQPPAPH DPSKAAAAAA DPNAAWAAYY SHYYQQPPGP VPGPAPAPAA PPAQGEPPQP PPTGQSDYTK AWEEYYKK**IG**

QQPQQPGAPP QQDYTKAWEE YYKKQAQVAT GGGPGAPPGS QPDYSAAWAE YYRQQAAYYG QTPGPGGPQP PPTQQGQQQA Q

b

```
hsa-KSRP        -------DQPESKKLASQGD-----SISSQLGPIHPP--PRTSMTEEYRVPDGMVGLIIG 161
mmu-KSRP        -------DQPDSKKLASQGD-----SIGSQLGPIHPP--PRTSMTEEYRVPDGMVGLIIG 162
xla-KSRP        MFGFPSPDQPECKKLATQPE-----SMPPQLAPVHPP--RSSSMTEEYRVPDGMVGLIIG 110
dre-KSRP        -------DQPESKKMASDRDNAAALSIGAQLAALSKQSVRPSSMTEEYRVPDGMVGLIIG 123
                      ***:.**:*:: :     *: .**..:       :******************

hsa-KSRP        RGGEQINKIQQDSGCKVQISPDSGGLPERSVSLTGAPESVQKAKMMLDDIVSRGRGGPPG 221
mmu-KSRP        RGGEQINKIQQDSGCKVQISPDSGGLPERSVSLTGAPESVQKAKMMLDDIVSRGRGGPPG 222
xla-KSRP        RGGEQINKIQQESGCKVQISPDSGGMPERIVSLTGNPDAVQKAKMLLDDIVLRGRGGPPS 170
dre-KSRP        RGGEQINKIQQDSGCKVQIAPDSGGLPDRSVSITGGPEAIQKAKMMLDDIVSRGRGTPPS 183
                ***********:*******:*****:*:* **:** *:::*****:***** **** **.

hsa-KSRP        QFHDNANGGQNGTVQEIMIPAGKAGLVIGKGGETIKQLQERAGVKMILIQDGSQNTNVDK 281
mmu-KSRP        QFHDNANGGQNGTVQEIMIPAGKAGLVIGKGGETIKQLQERAGVKMILIQDGSQNTNVDK 282
xla-KSRP        QFHDSSNG-QNGSLQEIMIPAGKAGLIIGKGGETIKQLQERAGVKMILIQDGSQNTNMDK 229
dre-KSRP        -FHESTNG--SGHMQEMVIPAGKAGLIIGKGGETIKQLQERAGVKMILIQDASQGPNMDK 240
                 **:.:**  .* :**::********:************************.**..*:**

hsa-KSRP        PLRIIGDPYKVQQACEMVMDILRERDQGGFGDRNEYGSRI-------------GGGIDVP 328
mmu-KSRP        PLRIIGDPYKVQQACEMVMDILRERDQGGFGDRNEYGSRV-------------GGGIDVP 329
xla-KSRP        PLRIVGEPFKVQQACEMVMDLLKERDQPNF-DRNEYGTRGGGGGGGG------GGGIDVP 282
dre-KSRP        PLRIIGDPYKVQQAREMVQEILRERDHPGF-ERNEYGSRMGGGGGGGGGGGGGGGGIEVP 299
                ****:*:*:***** *** ::*:***: .* :*****:*                ****:**

hsa-KSRP        VPRHSVGVVIGRSGEMIKKIQNDAGVRIQFKQDDGTGPEKIAHIMGPPDRCEHAARIIND 388
mmu-KSRP        VPRHSVGVVIGRSGEMIKKIQNDAGVRIQFKQDDGTGPEKIAHIMGPPDRCEHAARIIND 389
xla-KSRP        VPRHSVGVVIGRSGDMIKKIQNDAGVRIQFKQDDGTGPDKIAHIMGPPDRCEHAASIISD 342
dre-KSRP        VPRHSVGVVIGRSGEMIKKIQNDAGVRIQFKPDDGTGPDKIAHIMGPPDRCEHAASIINE 359
                ***************:*************** ******:*************** **.:

hsa-KSRP        LLQSLRS------GPPGPPGGPGMPPGGRGRGRGQG-NWG-PPGGEMTFSIPTHKCGLVI 440
mmu-KSRP        LLQSLRS------GPPGPPGAPGMPPGGRGRGRGQG-NWG-PPGGEMTFSIPTHKCGLVI 441
xla-KSRP        LLQSLRT------GPPGPPG-PGMPPGGRGRGRGQG-PWG-PPGGEMTFSIPTHKCGLVI 393
dre-KSRP        LLQSIRVREEGGGGPPGPPG-TGMPPGGRGRGRGPGGNWGGPPGSEMTFSIPAHKCGLVI 418
                ****:*       ******* .************ *  ** ***.*******:*******

hsa-KSRP        GRGGENVKAINQQTGAFVEISRQLPPNGDPNFKLFIIRGSPQQIDHAKQLIEEKIEGPLC 500
mmu-KSRP        GRGGENVKAINQQTGAFVEISRQLPPNGDPNFKLFVIRGSPQQIDHAKQLIEEKIEGPLC 501
xla-KSRP        GRGGENVKAINQQTGAFVEISRQPPPNGDPNFKMFIIRGNPQQIDHAKQLIEEKIEGPLC 453
dre-KSRP        GRGGENVKAINQQTGAFVEISRQPPPNGDPNFKLFTIRGSPQQIDHAKQLIEDKIEGPLC 478
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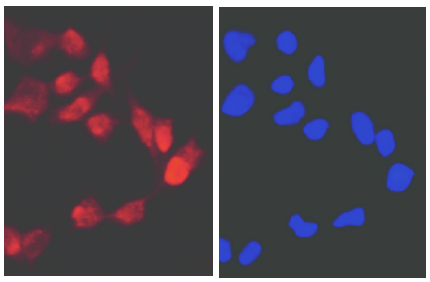
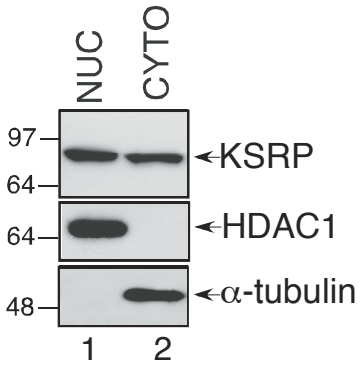
c

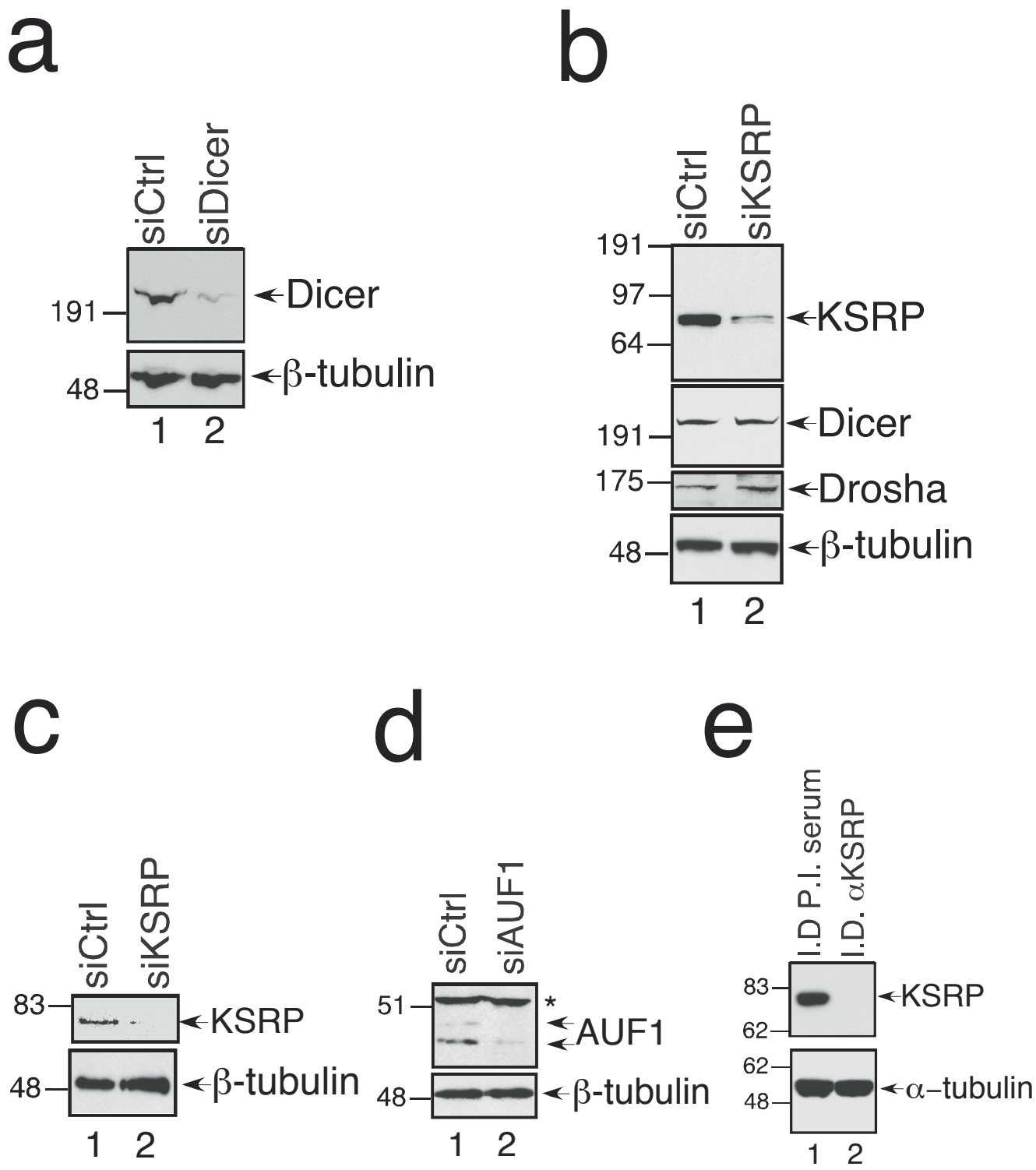


αKSRP DAPI

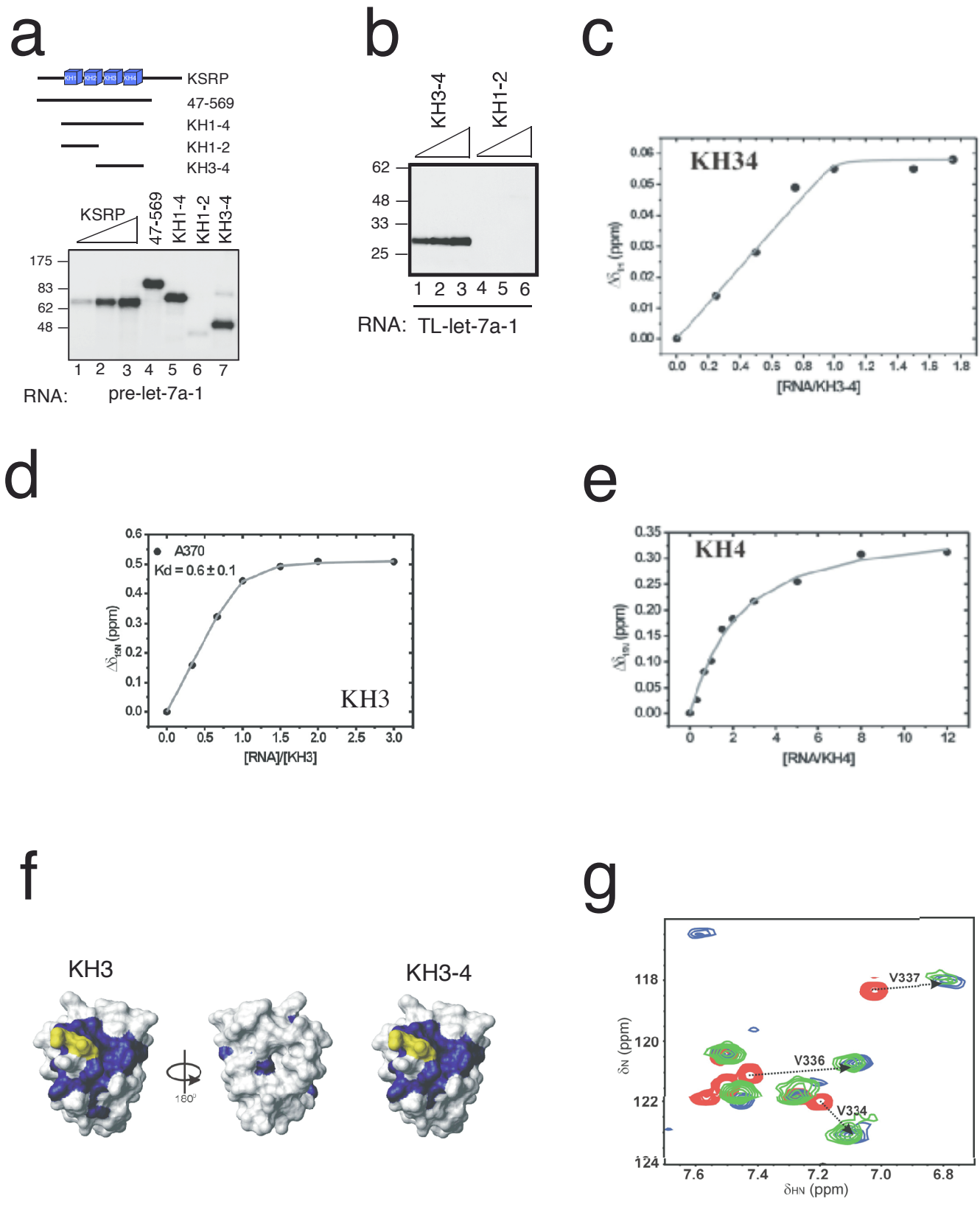
d



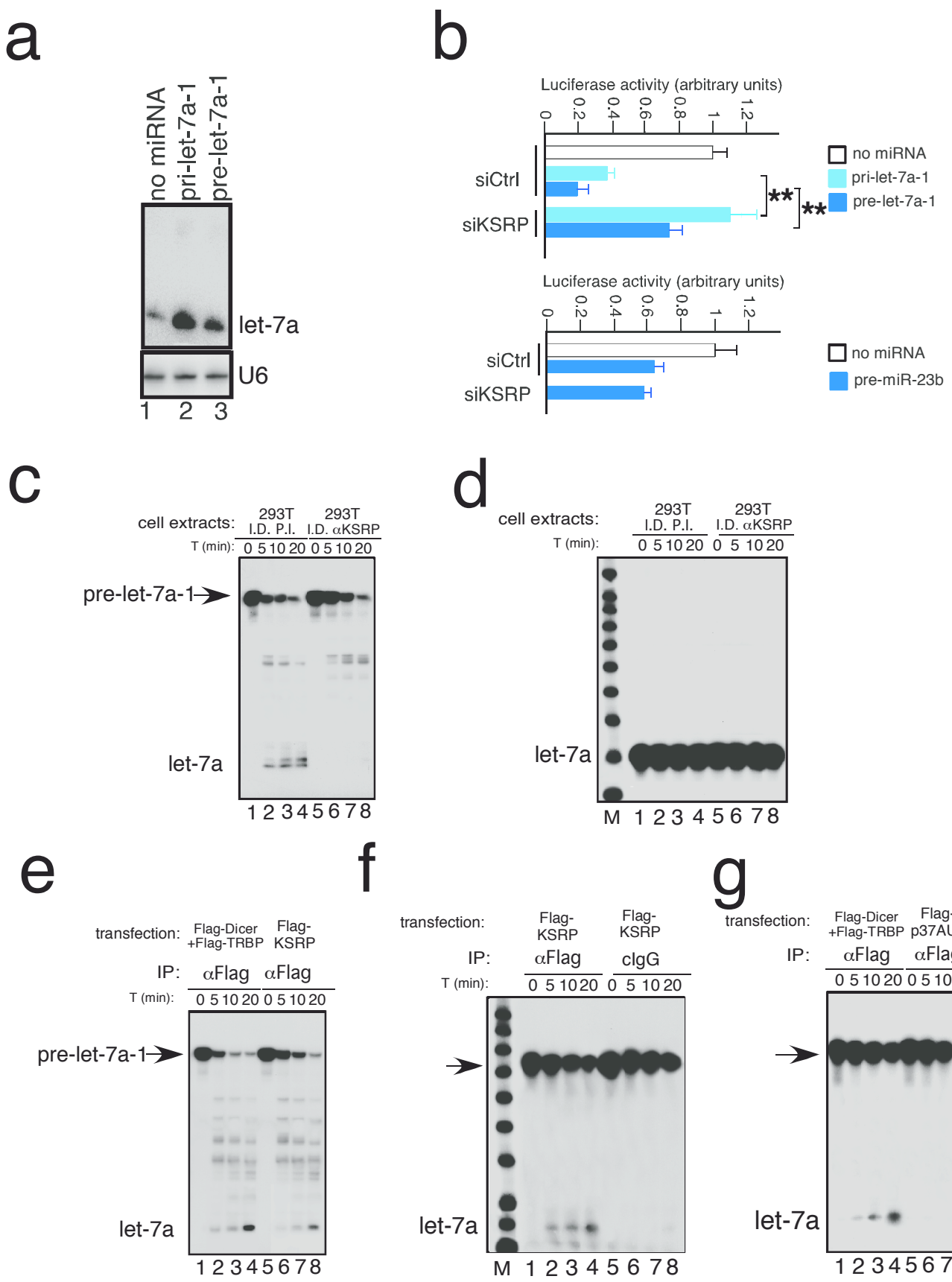
Trabucchi et al., 2008 revised version Supplementary Fig. 1



Trabucchi et al., 2008 revised version Supplementary Fig. 2



Trabucchi et al., 2008 revised version Supplementary Fig. 3

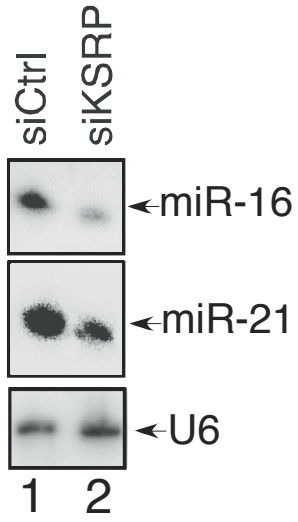


Trabucchi et al., 2008 revised version Supplementary Fig. 4

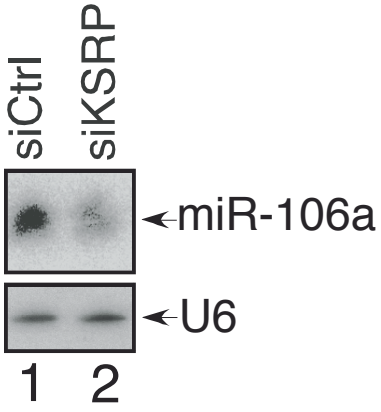
a

microRNAs	Sanger Accession #
hsa-let-7a	MI0000060-61-62
hsa-let-7b	MI0000063
hsa-let-7c	MI0000064
hsa-let-7d	MI0000065
hsa-let-7e	MI0000066
hsa-let-7f	MI0000067-68
hsa-let-7i	MI0000434
hsa-miR-98	MI0000100
hsa-miR-15b	MI0000438
hsa-miR-196a	MI0000238
hsa-miR-26b	MI0000084
hsa-miR-361	MI0000760
hsa-miR-595	MI0003607
hsa-miR-199a	MI0000242

b



c



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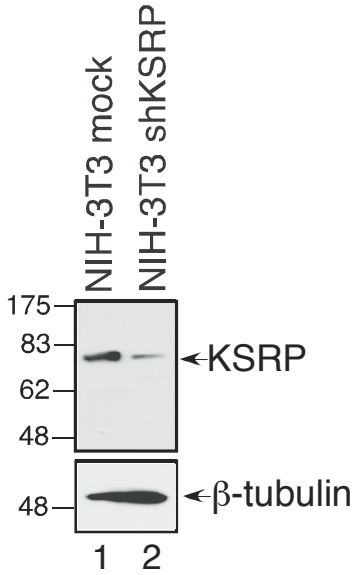
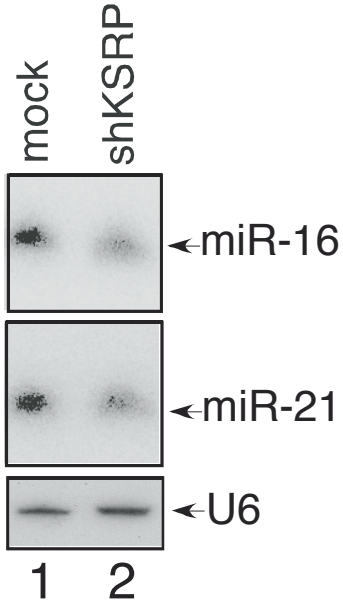
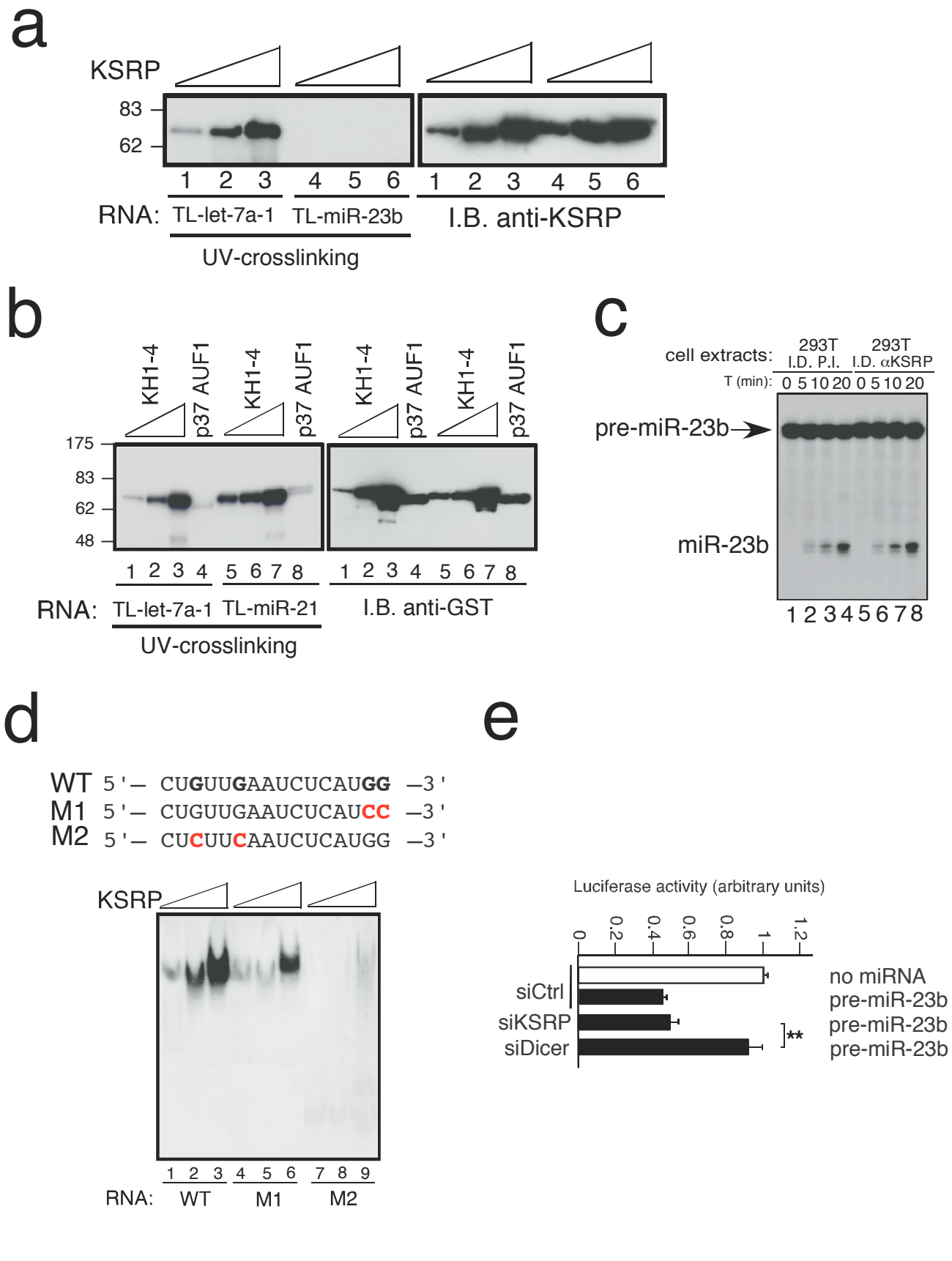


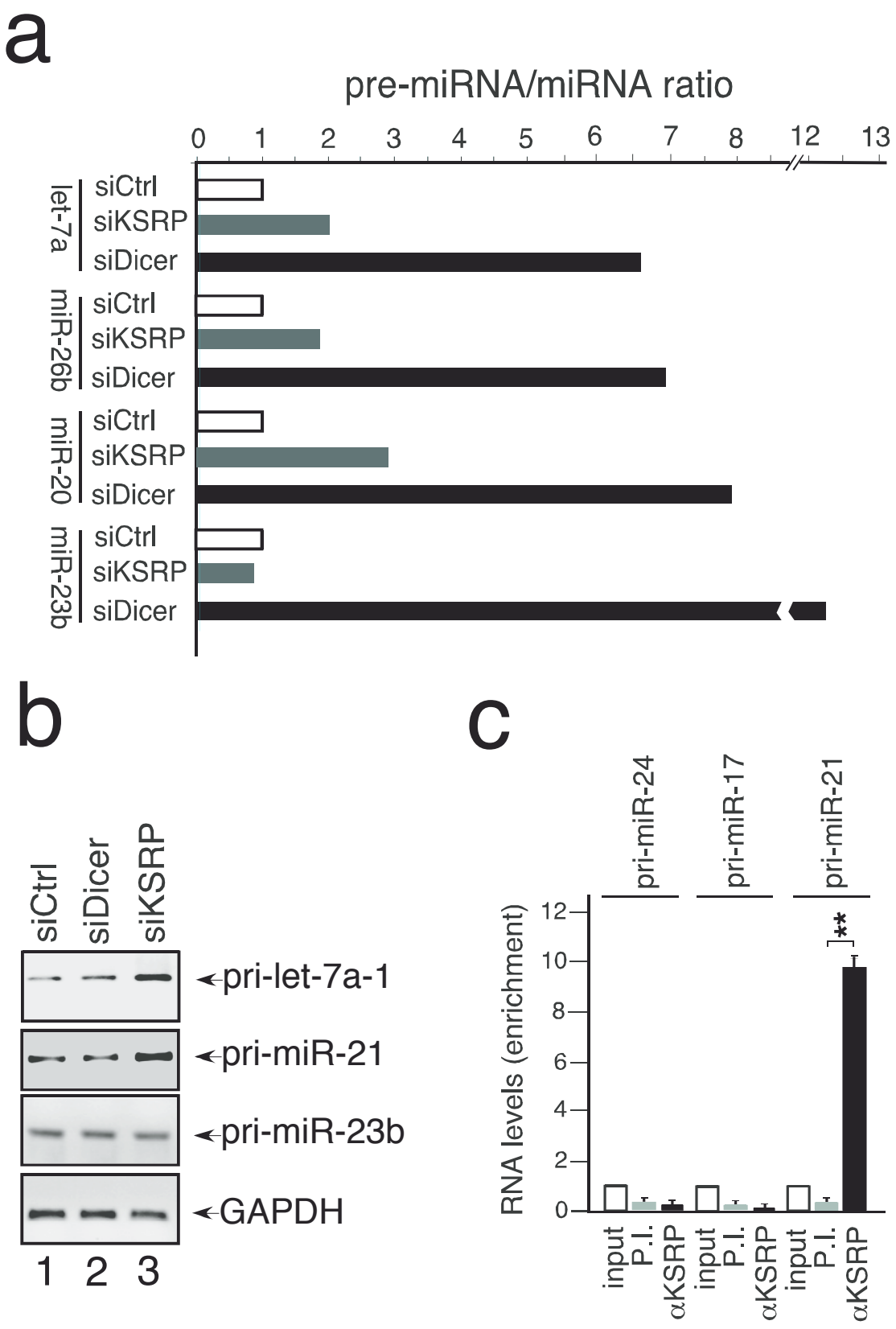
e



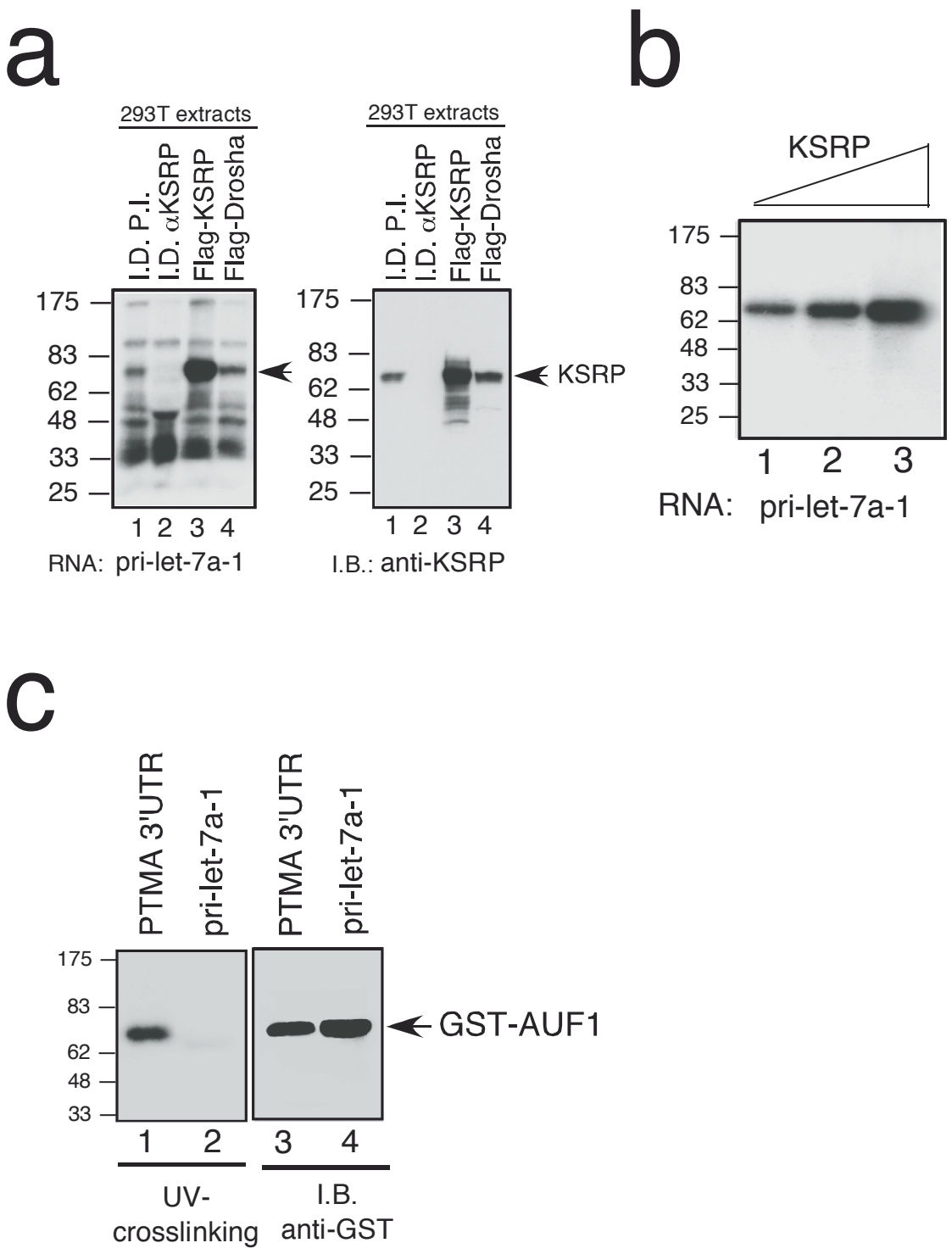
Trabucchi et al., 2008 revised version Supplementary Fig. 5



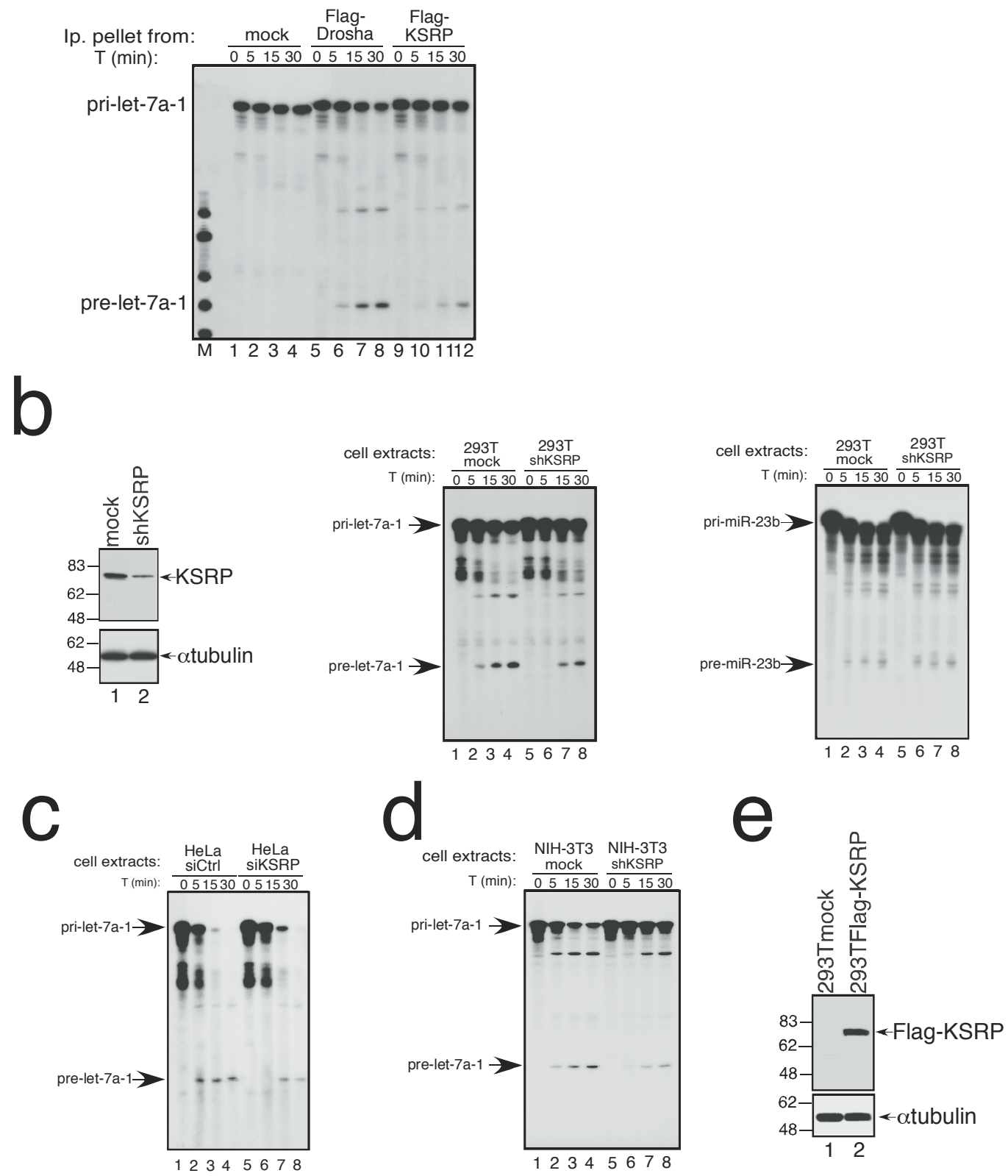
Trabucchi et al., 2008 revised version Supplementary Fig. 6



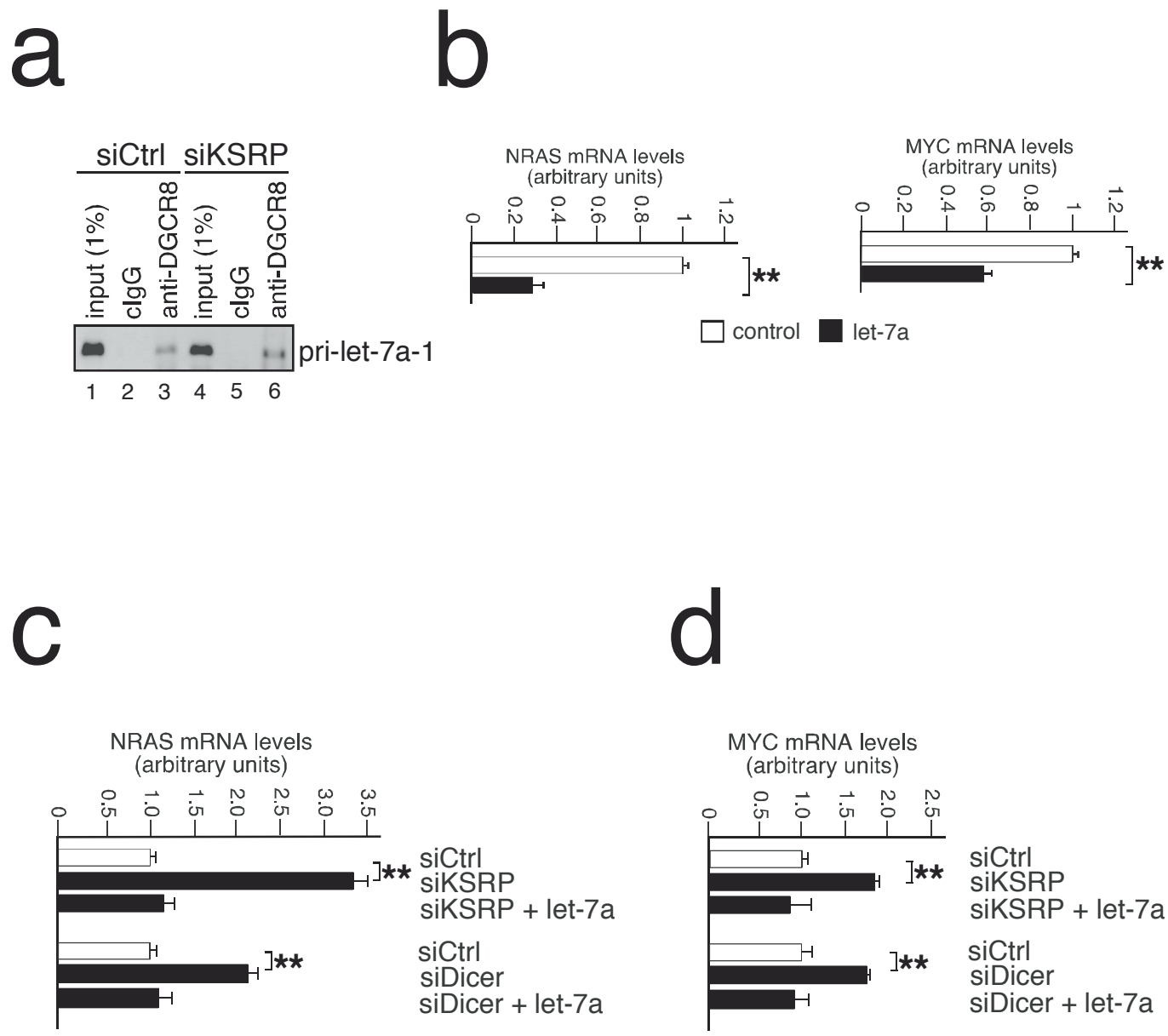
Trabucchi et al., 2008 revised version Supplementary Fig. 7



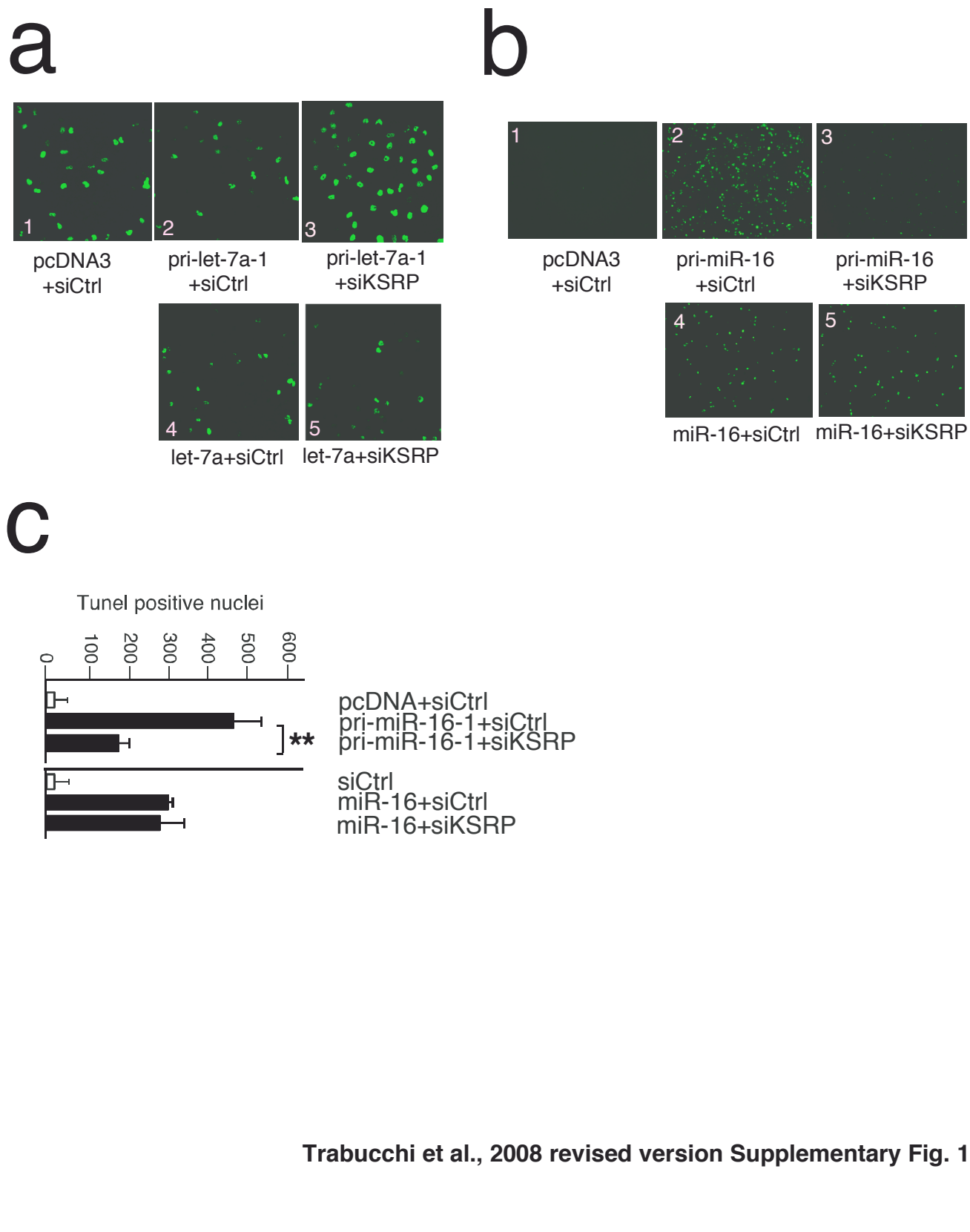
Trabucchi et al., 2008 revised version Supplementary Fig. 8



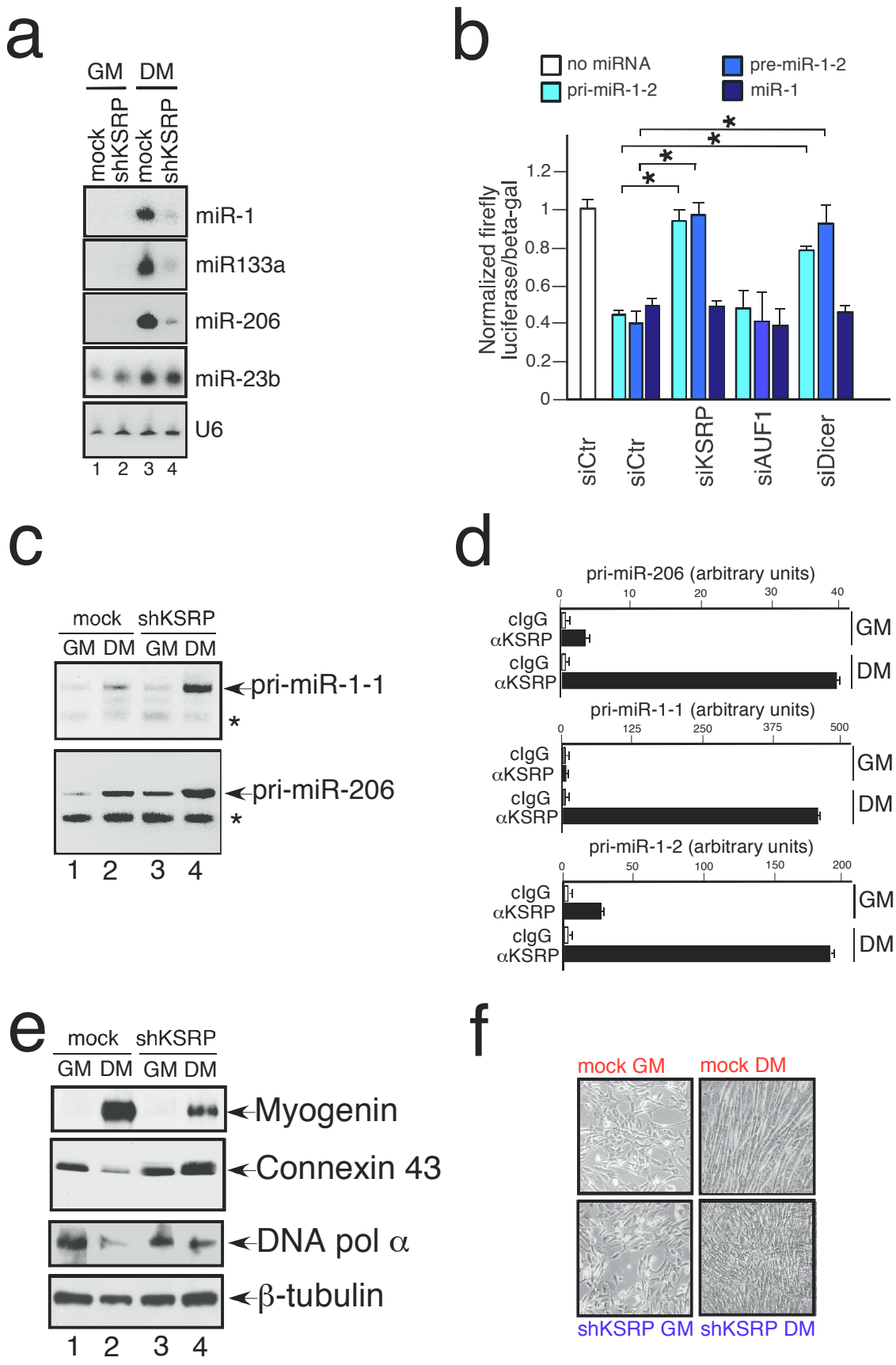
Trabucchi et al., 2008 revised version Supplementary Fig. 9



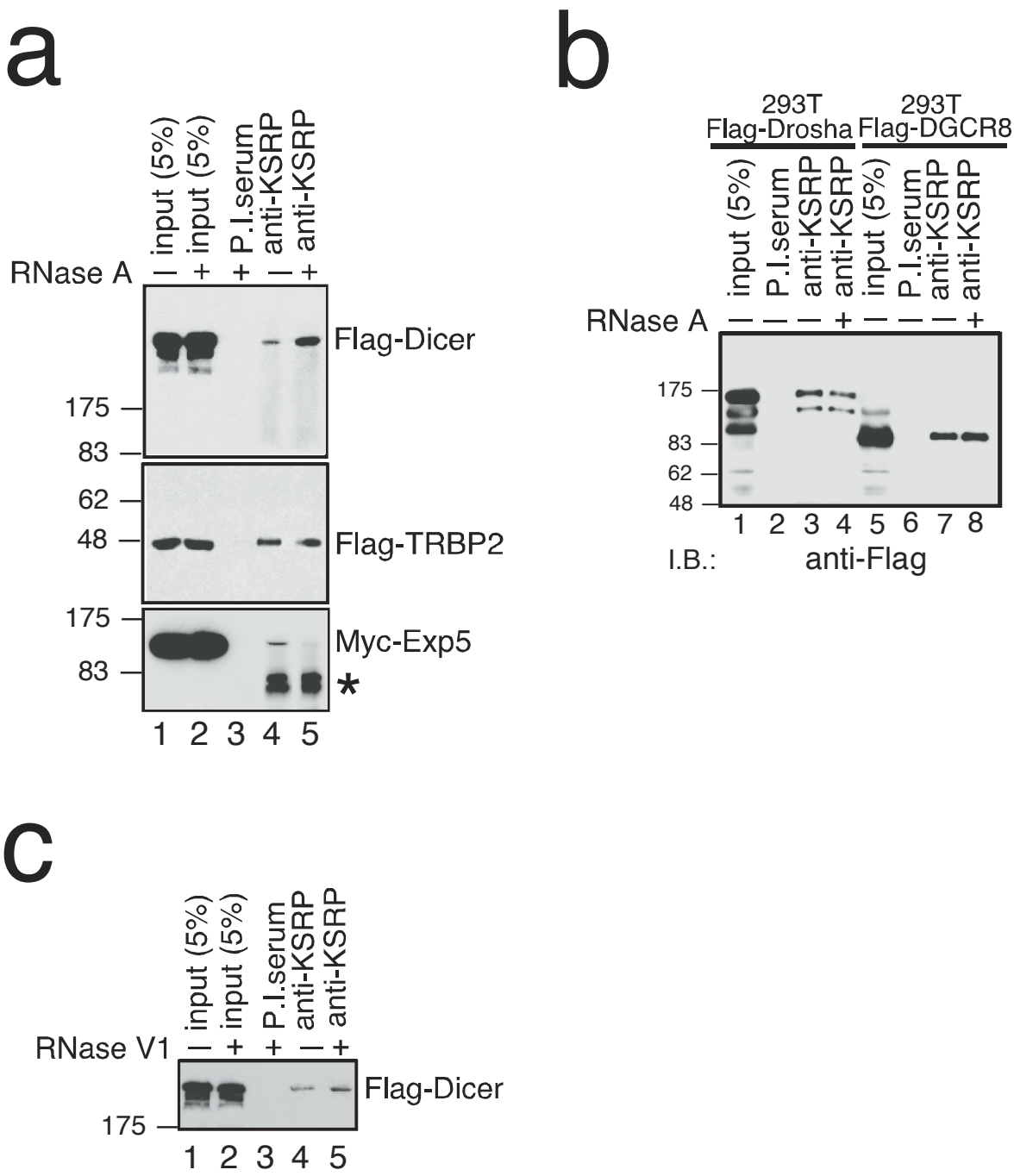
Trabucchi et al., 2008 revised version Supplementary Fig. 10



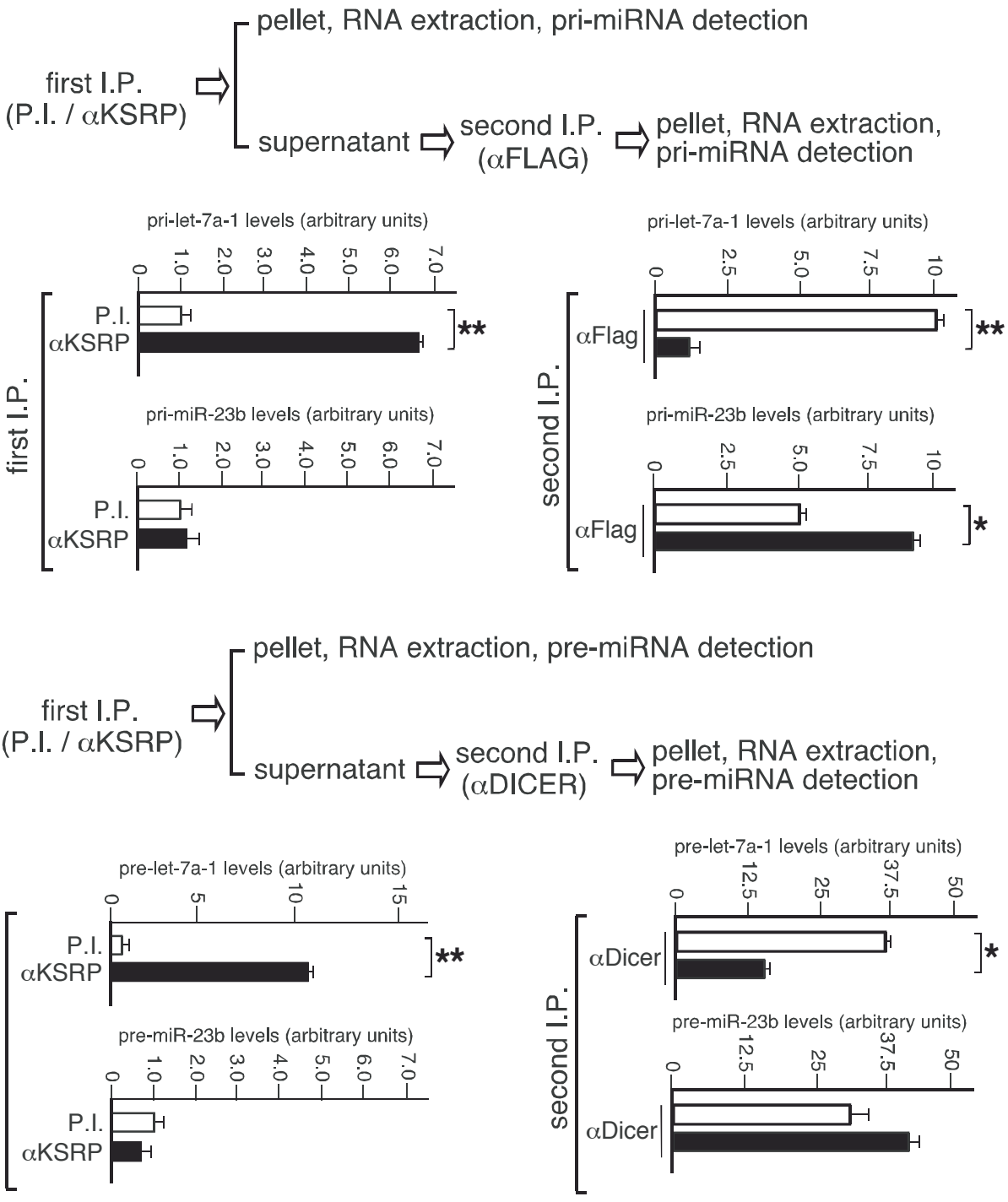
Trabucchi et al., 2008 revised version Supplementary Fig. 11



Trabucchi et al., 2008 revised version Supplementary Fig. 12



Trabucchi et al., 2008 revised version Supplementary Fig. 13



Trabucchi et al., 2008 revised version Supplementary Fig. 14