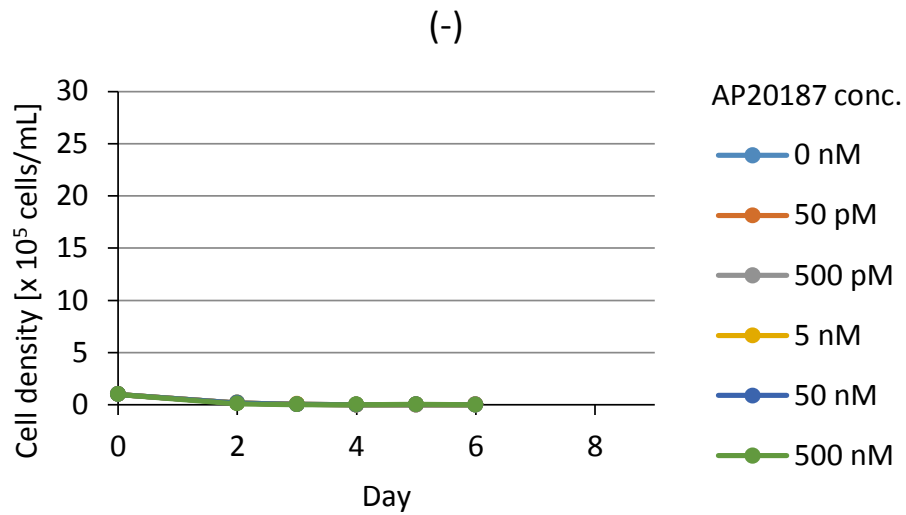


Supplementary Information

Detecting protein–protein interactions based on kinase-mediated growth induction of mammalian cells

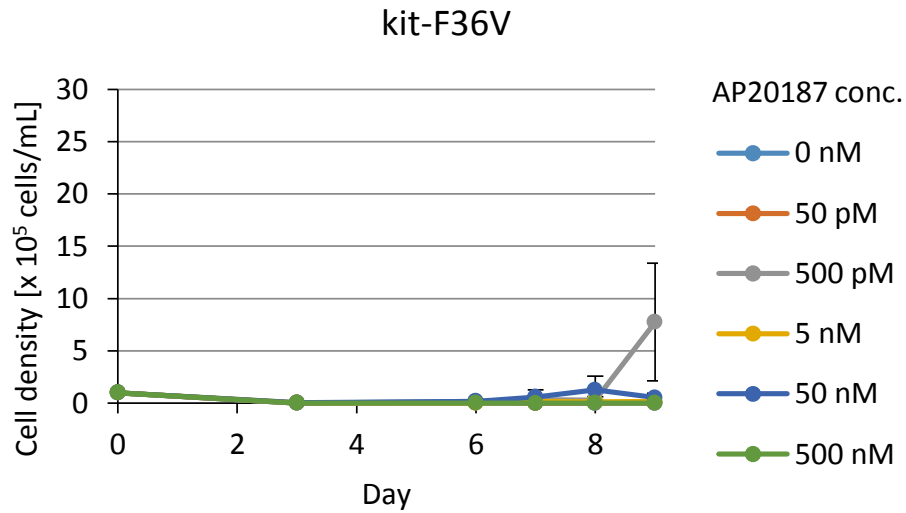
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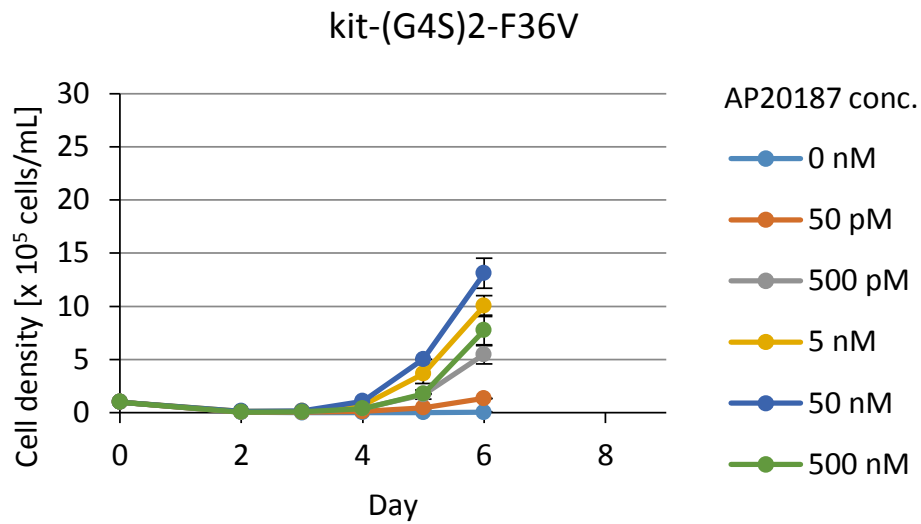
Supplementary Figure 1

Time-dependent measurement of AP20187-dependent growth properties of cells expressing no chimera (untransduced Ba/F3 cells) as a negative control. Cells were cultured with AP20187 at indicated concentrations. Initial cell density was 1×10^5 cells/mL. The viable cell densities are plotted as mean \pm SD (n=3, biological replicates).



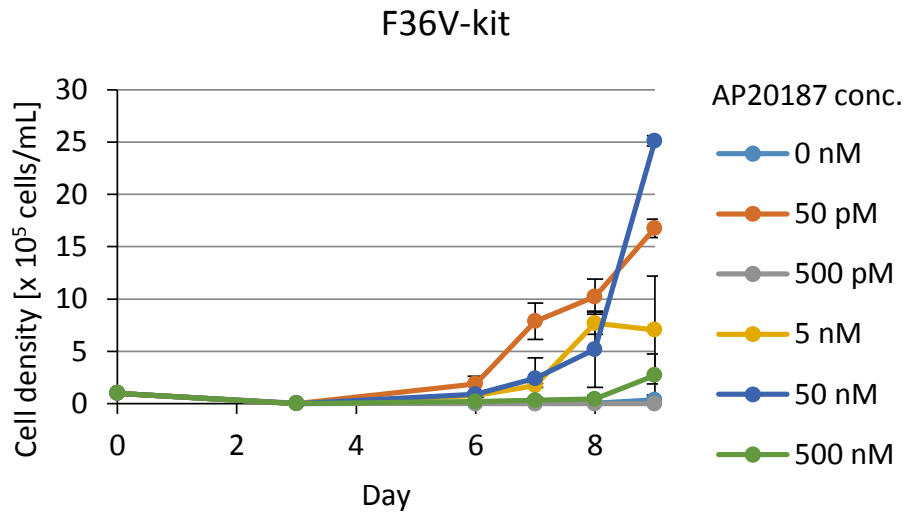
Supplementary Figure 2

Time-dependent measurement of AP20187-dependent growth properties of cells expressing kit-F36V. Cells were cultured with AP20187 at indicated concentrations. Initial cell density was 1×10^5 cells/mL. The viable cell densities are plotted as mean \pm SD (n=3, biological replicates).



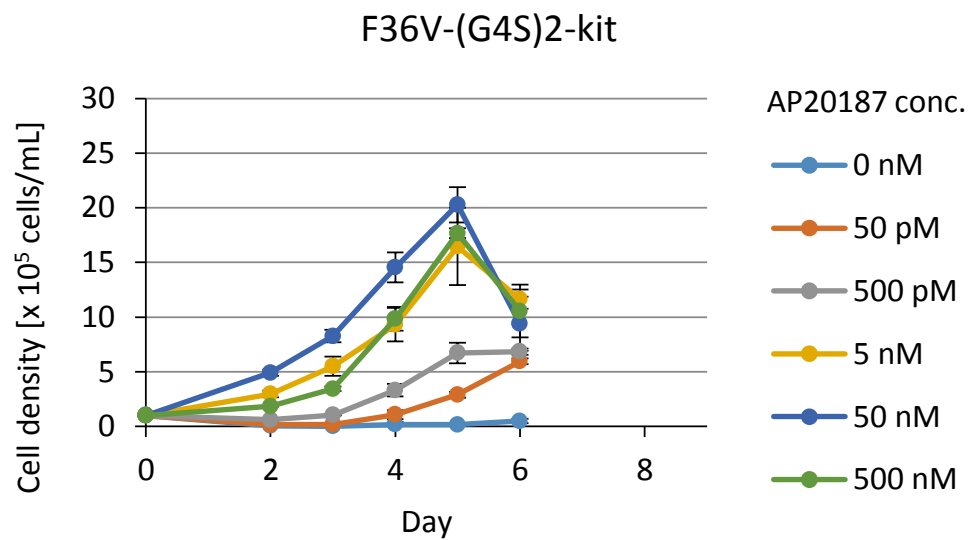
Supplementary Figure 3

Time-dependent measurement of AP20187-dependent growth properties of cells expressing kit-(G₄S)₂-F36V. Cells were cultured with AP20187 at indicated concentrations. Initial cell density was 1×10^5 cells/mL. The viable cell densities are plotted as mean \pm SD (n=3, biological replicates).



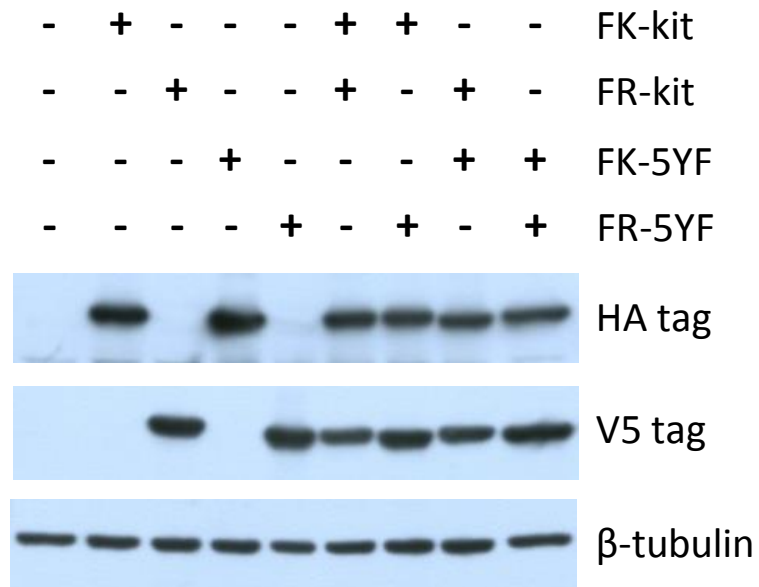
Supplementary Figure 4

Time-dependent measurement of AP20187-dependent growth properties of cells expressing F36V-kit. Cells were cultured with AP20187 at indicated concentrations. Initial cell density was 1×10^5 cells/mL. The viable cell densities are plotted as mean \pm SD (n=3, biological replicates).



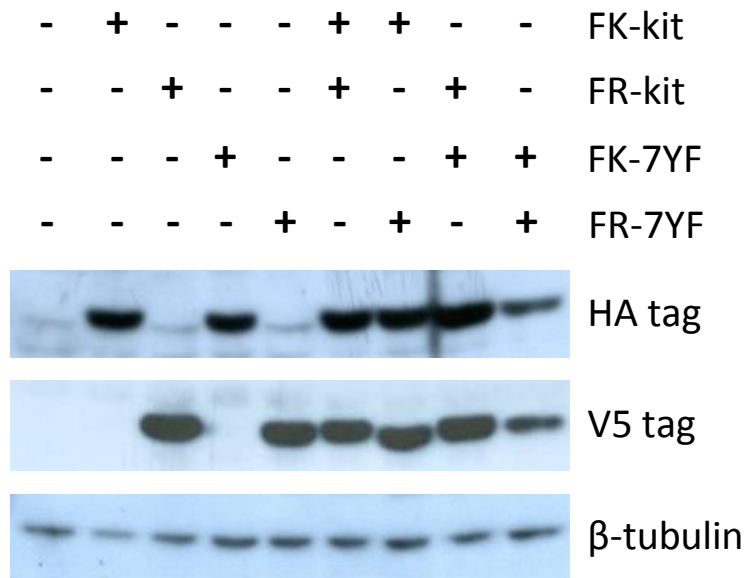
Supplementary Figure 5

Time-dependent measurement of AP20187-dependent growth properties of cells expressing F36V-(G4S)₂-kit. Cells were cultured with AP20187 at indicated concentrations. Initial cell density was 1×10^5 cells/mL. The viable cell densities are plotted as mean \pm SD (n=3, biological replicates).



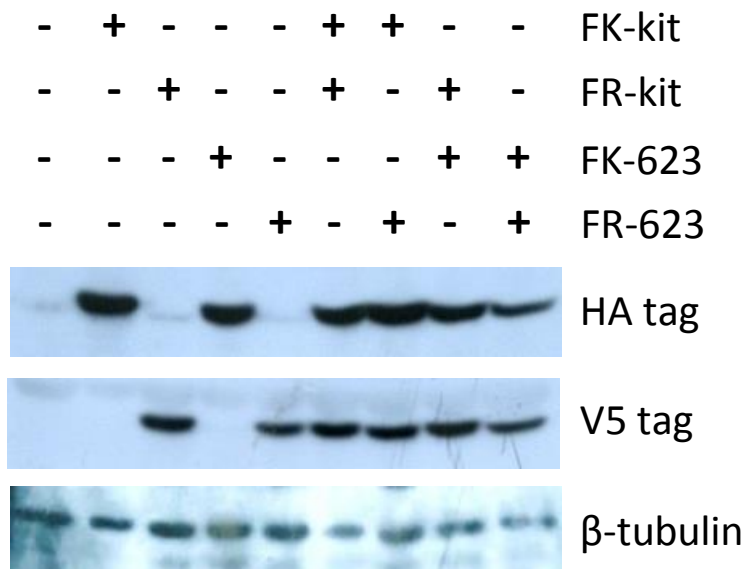
Supplementary Figure 6

The expression of FKBP-fused chimeras (HA tag) and FRB_{T2098L}-fused chimeras (V5 tag) in the transductants expressing the 5YF c-kit mutant chimeras. The blots for β -tubulin were indicated as a loading control.



Supplementary Figure 7

The expression of FKBP-fused chimeras (HA tag) and FRB_{T2098L}-fused chimeras (V5 tag) in the transductants expressing the 7YF c-kit mutant chimeras. The blots for β -tubulin were indicated as a loading control.



Supplementary Figure 8

The expression of FKBP-fused chimeras (HA tag) and FRB_{T2098L}-fused chimeras (V5 tag) in the transductants expressing the K623M c-kit mutant chimeras. The blots for β -tubulin were indicated as a loading control.

Supplementary Table 1

Primer sequences used in this study. Primers are listed in alphabetical order.

Primer name	Sequence (5' to 3')
EpoRTM-RT-kit_r	TAAATATTTGTAGGTCGTACGGAGCAGCGCGAGCAC
F36V_f	GGAGTGCAGGTGGAGACTATC
F36V_r	TTCCAGTTTTAGAAAGCTCCAC
F36V-G4S_r	TGAACCGCCTCCACCGCTCGAGCCTTCCAGTTTTAGA AGCT
F36V-ID-Myc_f	CTTCTAAAACCTGGAAATCGATGAACAAAACTCATC
FRB_f	ATCCTCTGGCATGAGATGTG
FRB_r	TTTTGAGATTCGTCGGAACAC
FR-GSSG4S_r	TGAACCGCCTCCACCGCTCGAGCCTTTTGAGATTCGT CG
G4S-F36V_f	GGCGGTGGCGGGTCGACGGGAGT
G4S-kit_f	GGCGGTGGCGGGTCGACGACCTACAAATATTTACAG AA
G4ST-FR_f	GGCGGTGGCGGGTCGACGATCCTC
GSS-G4S2_f	GGCTCGAGCGGTGGAG
HA-GSG_r	TCCGGAACCAGCATAATCTGGAAC
HA-GSG-MDM2_f	TATGCTGGTTCCGGAGCTTCGGAACAAGAGACCCTG
IF-36-GST-kit-r	CTGTAAATATTTGTAGGTCGTCGAGCCTTCCAGTTTT AGAAGCTCCACATCGAAGAC
IF-FK-GST-kit_r	TAAATATTTGTAGGTCGTCGAGCCTTCCAGTTTTAGA AGCTCCACATCGAAGACGAG
IF-FR-GST-kit_f	CGACGAATCTCAAAAGGCTCGACGACCTACAAATAT TTACAG
IF-FR-ID-myc_f	CGACGAATCTCAAAAATCGATGAACAAAACTCATC TCAGAAGAAGATC
IF-G4S2-kit_r	TAAATATTTGTAGGTCGTCGACCCGCCACCG
IF-HA-GSG-kit_r	TAAATATTTGTAGGTTCCGGAACCAGCATAATCTGG AACATC
IF-kit-GST-FK_f	GTGCACGACGATGTCCGGCTCGACGGGAGTGCAGGTG GAAAC
IF-kit-GST-FR_r	CTCATGCCAGAGGATCGTCGAGCCGACATCG
IF-kit-ID-myc_f	GTGCACGACGATGTCATCGATGAACAAAACTCATC TCAGAAGAAGATC

IF-kit-I-flag_f	GTGCACGACGATGTCATCGATTACAAGGATGACGAC GATAAGATCTAG
IF-V5-GST-FR_r	CTCATGCCAGAGGATTCCGGAACCCGTAGAATC
kit-G4S_r	TGAACCGCCTCCACCGCTCGAGCCGACATCGTCGTG C
kit-GST-F36V_f	GTGCACGACGATGTCGGCTCGACGGGAGTGCAGGTG
kitIC_f	ACCTACAAATATTTACAGAAAC
kitIC_r	GACATCGTCGTGCACAAGCAG
MDM2-GSS-G4S2_r	TCCACCGCTCGAGCCCTGCTGATTGACTACTACCAA GTTCCCTGTAGATC
mpl-GST-F36V_r	CTCCACCTGCACTCCCGTCGAGCCAGGCTGCTGCC
p53like-G4S2_f	TGGGCCAGCTGACCAGCGGCTCGAGCGGTGGAGGC GGTTC
p53pep-G4S2_f	CTGTGGAAGCTGCTGCCTGAGAACGGCTCGAGCGGT GGAGGCG
pMK-IK-host_f3	TGAGTCGACGATAAAATAAAAGATTTTATTTAGTCT CC
pMK-IK-host_r	GGTTGTGGCCATATTATCATCGTGTTTTTC
pMK-IK-inser_r2	TTTATCGTCGACTCAGCAGTGGGCCACGGCG
pMK-IK-insert_f	AATATGGCCACAACCATGGTGAGCGTGATC
QC-K623M_f	GCTGTAATGATGCTCAAGCCGAGT
QC-K623M_r	GAGCATCATTACAGCGACAGTCATG
QC-Met-V5_f	CACCATGGGTAAGCCTATCCCTAACC
QC-Met-V5_r	GGCTTACCCATGGTGAATTCCCGTAC
QC-V5-GSG-36V_f	TTCCGGAGGAGTGCAGGTGGAGACTA
QC-V5-GSG-36V_r	TGCACTCCTCCGGAACCCGTAGAATCGAG
QC-V5-GSG-kit_f	TTCCGGAACCTACAAATATTTACAGAAACCC
QC-V5-GSG-kit_r	TTGTAGGTTCCGGAACCCGTAGAATC
QC-Y568,570F_f	AATTTTGTTCATAGACCCAACACAACCTTC
QC-Y568,570F_r	TATGAAAACAAAATTGTTTCCATTTATCTCCTCA
V5-GSG-G4S2_f	GTTCCGGAGGCTCGAGCGGTGGAG
V5-GSG-G4S2_r	TCGAGCCTCCGGAACCCGTAGAATCGAG
V5-p53like_r	GTAGTGCTCGAATGTCAGTCCGGAACCCGTAGAATC GAGACCGAGG
V5-p53pep_r	GTCGCTGAATGTCTCCTGGCTTCCGGAACCCGTAGA ATCGAGAC

Supplementary Table 2

The correspondence between the constructed plasmids and names of chimeras. The final plasmid construct for expression of each chimera is listed.

Chimera name	Plasmid name
kit-F36V	pMK-kit-del-F36V-IP
kit-(G4S)2-F36V	pMK-kit-(G4S)2-F36V-IP
F36V-kit	pMK-F36V-del-kit-IP
F36V-(G4S)2-kit	pMK-F36V-(G4S)2-kit-IP
kit-FK	pFB-kit-(G4S)2-FKBP-IN
kit-FR	pMK-kit-(G4S)2-FRB _{T2098L} -IP
FK-kit	pFB-FKBP-(G4S)2-kit-IN
FR-kit	pMK-FRB _{T2098L} -(G4S)2-kit-IP
FK-5YF	pFB-FKBP-(G4S)2-5YF-IN
FR-5YF	pMK-FRB _{T2098L} -(G4S)2-5YF-IP
FK-7YF	pFB-FKBP-(G4S)2-7YF-IN
FR-7YF	pMK-FRB _{T2098L} -(G4S)2-7YF-IP
FK-623	pFB-FKBP-(G4S)2-K623M-IN
FR-623	pMK-FRB _{T2098L} -(G4S)2-K623M-IP
MDM2-kit	pFB-MDM2(21-113)-kit-IN
non-kit	pMK-non-kit-IP
p53pep-kit	pMK-p53pep-kit-IP or pMK-p53pep-kit-IG
pDI-kit	pMK-pDI-kit-IP or pMK-pDI-kit-IK