Science Advances
AAAS

advances.sciencemag.org/cgi/content/full/5/7/eaau9433/DC1

Supplementary Materials for

Efficient apoptosis requires feedback amplification of upstream apoptotic signals by effector caspase-3 or -7

Scott McComb, Pik Ki Chan, Anna Guinot, Holmfridur Hartmannsdottir, Silvia Jenni, Maria Pamela Dobay, Jean-Pierre Bourquin, Beat C. Bornhauser*

*Corresponding author. Email: beat.bornhauser@kispi.uzh.ch

Published 31 July 2019, *Sci. Adv.* **5**, eaau9433 (2019)
DOI: 10.1126/sciadv.aau9433

This PDF file includes:

Fig. S1. Caspase-8 and -9 are specifically required to activate extrinsic and intrinsic apoptosis, respectively.
Fig. S2. Caspase-3 and -7 have overlapping roles in executing apoptotic cell death.

Fig. S1

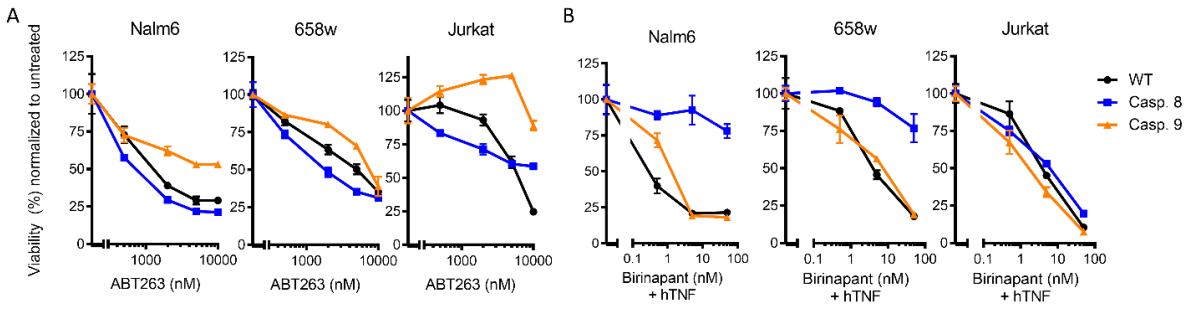

Fig. S1. Caspase-8 and -9 are specifically required to activate extrinsic and intrinsic apoptosis, respectively. (**A**-**B**) Cell viability using 7-AAD of wt, caspase-8 and caspase-9 deficient leukemia cells upon intrinsic (A, ABT263) or extrinsic (B, Birinapant and TNFa) measured by CCK8.

Fig. S2

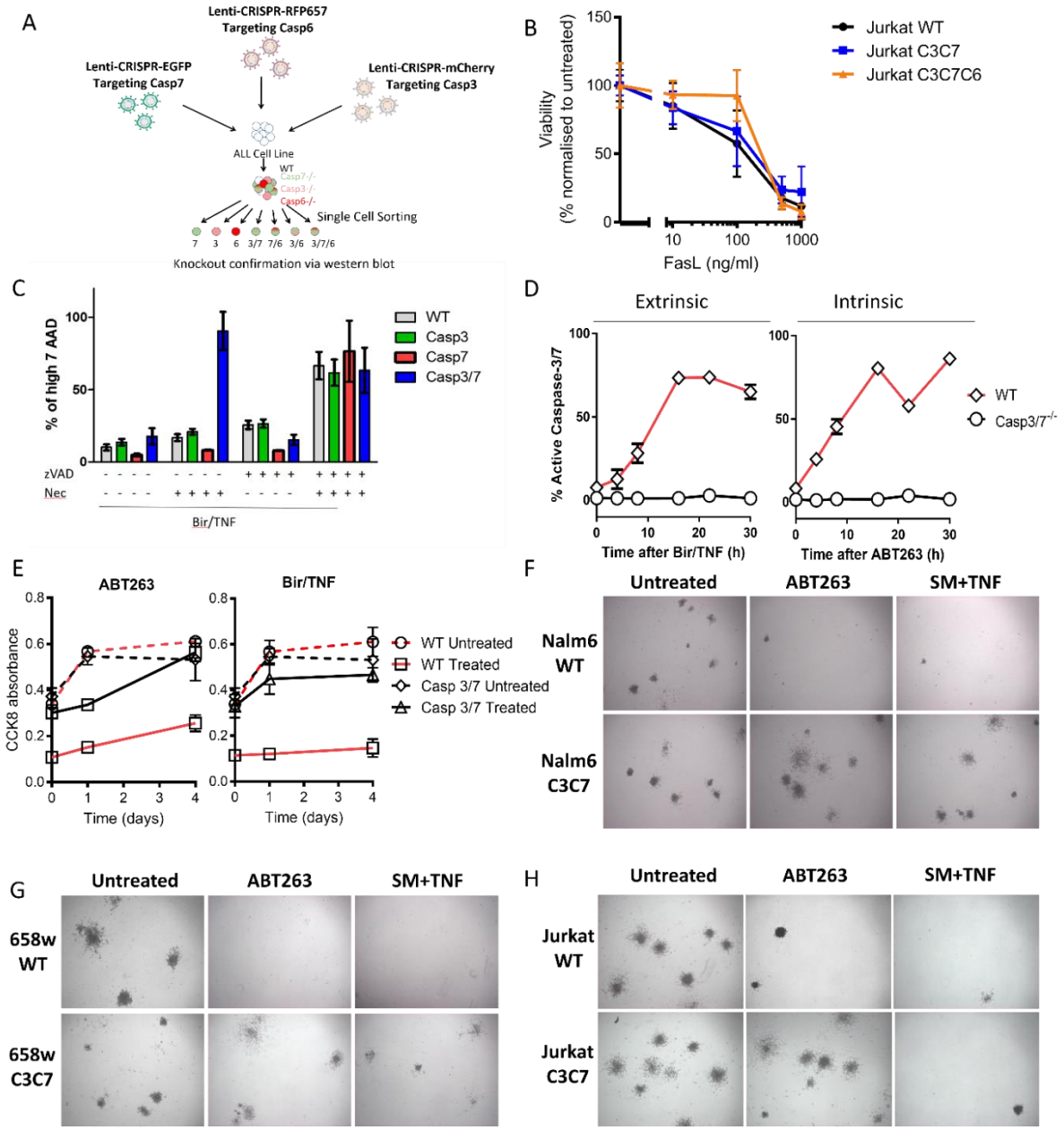

Fig. S2. Caspase-3 and -7 have overlapping roles in executing apoptotic cell death. (**A**) Graphical model of generation of caspase deficient ALL cell lines with Lenti-CRISPR vectors. (**B**) Jurkat WT, casp3/7-/- or casp3/6/7-/- were treated with FasL at indicated concentrations, and viability was assessed. (**C**) Cell viability by 7-AAD in wt, casp3, casp7 or casp3/7 deficient cells upon Birinapant and TNFa treatment, with and without zVAD or NEC1s. (**D**) Absence of caspase 3/7 activity measured by fluorogenic substrate in caspase 3/7 deficient leukemia cells, both upon Birinapant and TNF (left) and after ABT263 (right). (**E**) NALM6 WT and casp3/7-/- cells were treated for 24 hours with either Bir/TNF or ABT263 or vehicle (as described in Fig. 3), after which cells were washed with PBS and centrifuged then resuspended in media and returned to culture. Cell viability was then measured after 0, 1 and 4 additional days in culture to assess residual viability. Graphs show the mean +/- SEM

of 3 independent experiments performed in duplicate. (**F-H**) Representative micrographs of colony assays are given for WT and casp3/7 deficient cells for NALM6 (F), 658w (G) and Jurkat (H) cells after indicated treatment.