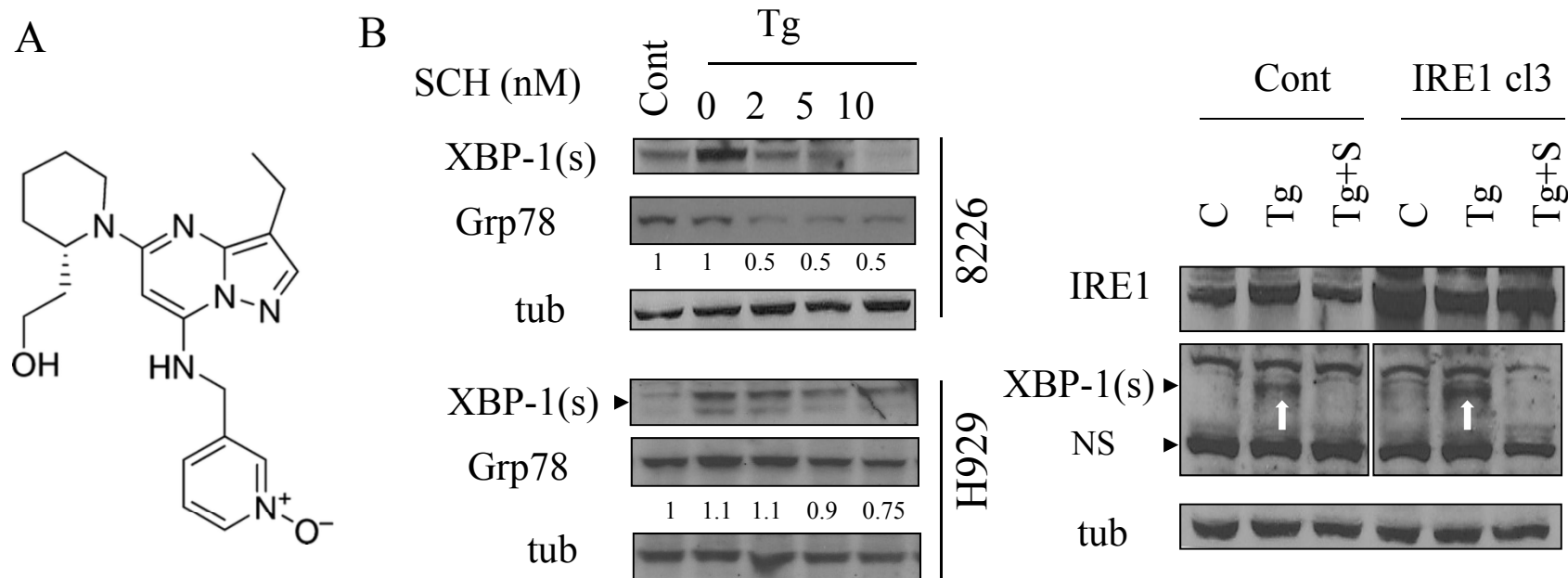
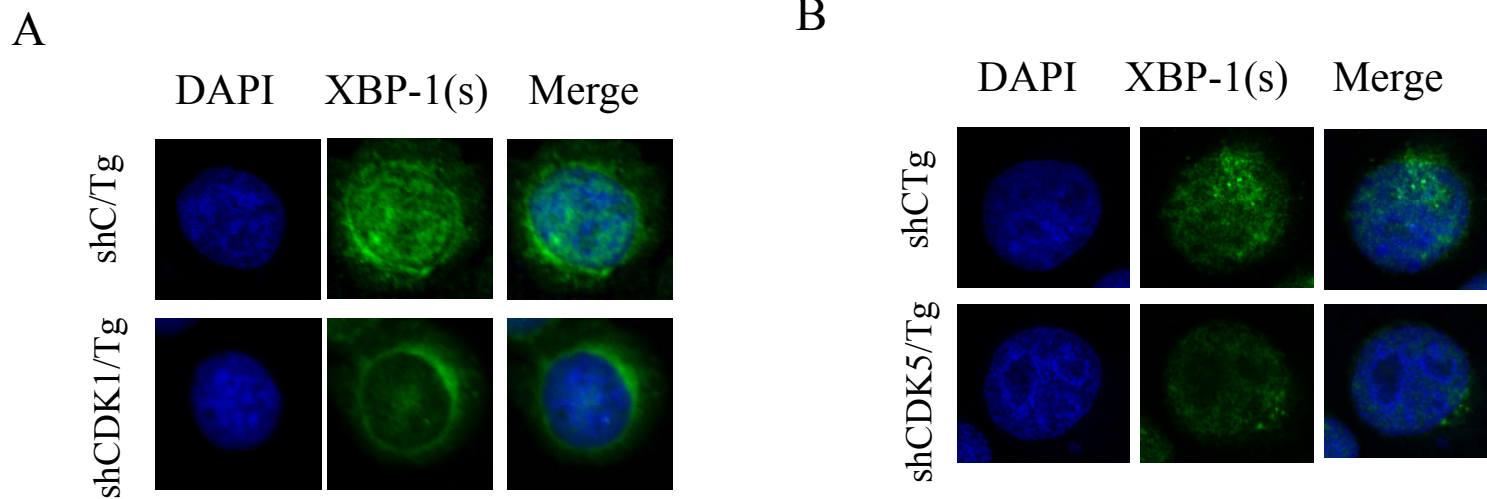


Supplementary Figure 1: SCH727965 blocks induction of XBP-1s and Grp78.



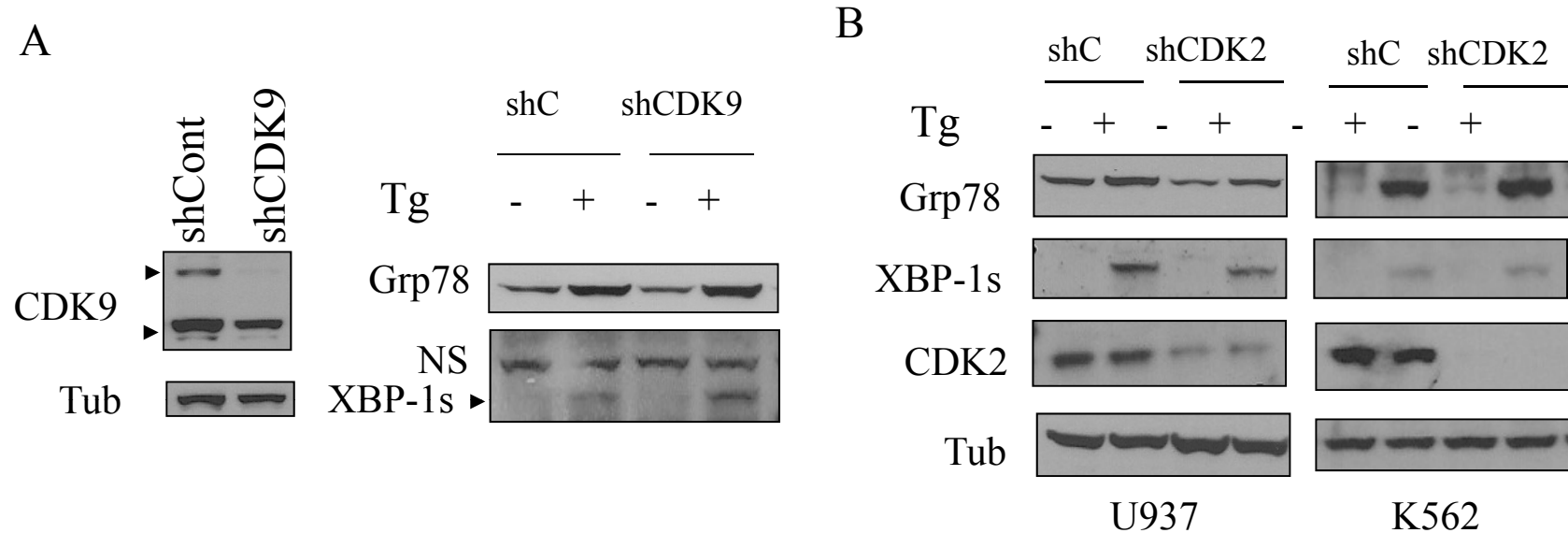
(A) Structure of SCH727965. (B) 8226, H929 cells were exposed to Tg (0.5-2.5 μ M) alone or in combination with SCH727965 (2-10 nM) for 4h, after which cells were lysed and analyzed. K562 cells were stably transfected with IRE1/pcDNA3 or a corresponding empty vector. A clone over-expressing IRE1 was selected, referred to as K562/Ire1/cl3. Both K562/cont and K562/IRE1/cl3 cells were exposed to 5 μ M Tg with or without SCH727965 (5 nM) for 6h, after which cells were lysed and analyzed by Western blot. White arrows correspond to XBP-1s protein.

Supplementary Figure 2: Knockdown CDK1 or CDK5 reduced nuclear XBP-1s expression.



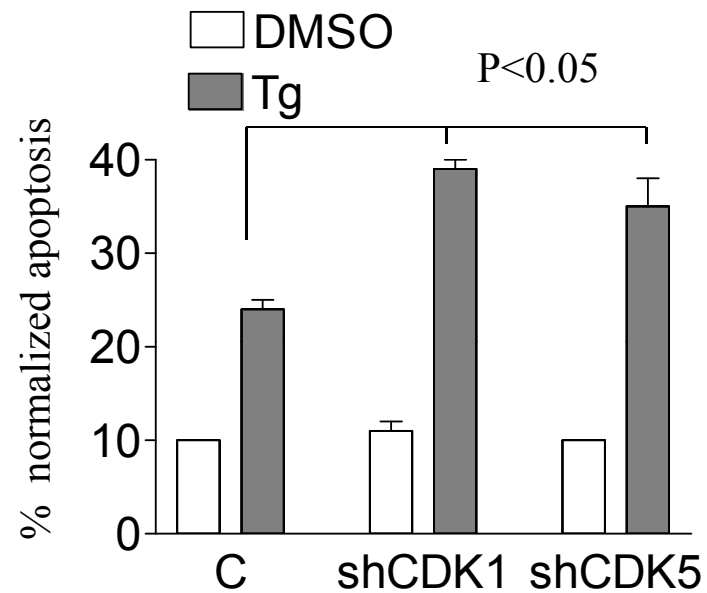
(A) U937 cells were transfected with shCont/pLKO.1 or shCDK1/pLKO.1 for 48h, after which cells were exposed to Tg (2 μ M; 3h) followed by confocal microscopy to monitor XBP-1s (blue-DAPI: nuclear, green: XBP-1s). (B) K562/shCont and K562/shCDK5 cells were exposed to Tg (5 μ M; 3h) followed by confocal microscopy to monitor XBP-1s (blue-DAPI: nuclear, green: XBP-1s).

Supplementary Figure 3: Knockdown CDK2 or CDK9 exhibits very modestly or no changes in XBP-1s or Grp78 following Tg exposure.



(A) K562 cells were transfected with shCDK9/pLKO.1 or shC/pLKO.1 constructs. After 72h, the cells were exposed to 5 μ M Tg for 6h, after which cell extracts were subjected to Western blot analysis using the indicated primary antibodies. (B) U937 and K562 cells were transfected with shCDK2/pLKO.1 or shCont/pLKO.1, after which a pooled clone from each transfection was selected. The clones were exposed to 2.5-5 μ M Tg for 6h, after which the cell extracts were subjected to Western blot analysis using the indicated primary antibodies.

Supplementary Figure 4: Knockdown CDK1 or CDK5 increases sensitivity to ER stress inducers



U937 cells were transfected with shCDK1/pLKO.1, shCDK5/pLKO.1, or control/pLKO.1 constructs for 48 hr, after which the cells were exposed to Tg 50nM for 16 hr, after which cell death was monitored by 7-AAD.