Supplementary Material

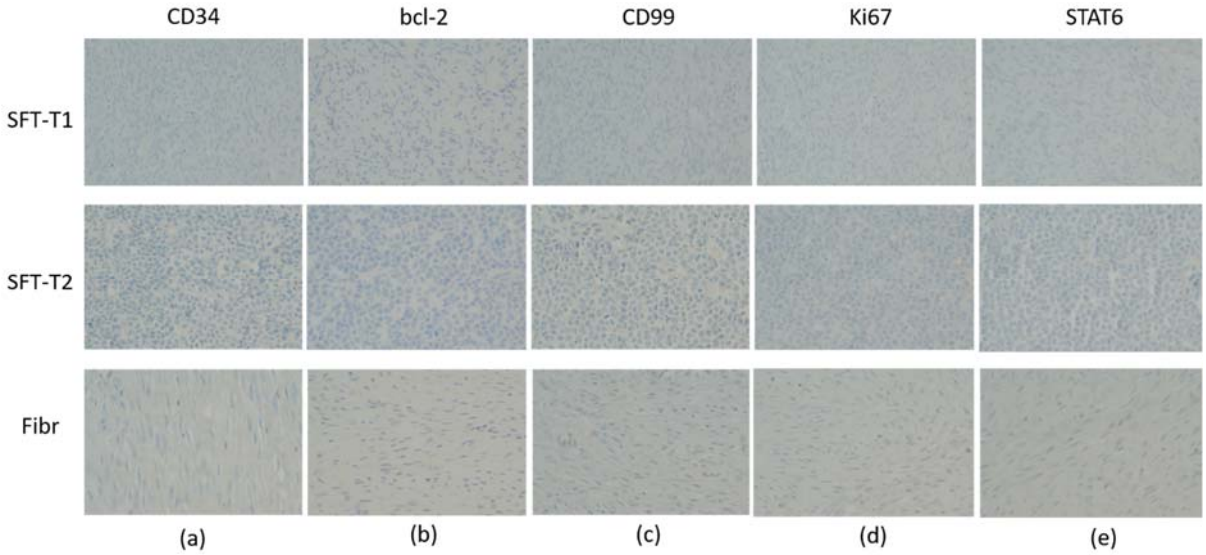

Figure S1. Representative (immune-) histological pictures of negative control stainings with isotypes corresponding to the antibodies (**a**) CD34, (**b**) bcl-2, (**c**) CD99, (**d**) Ki67, (**e**) STAT6 of the two included tumors (SFT-T1 and SFT-T2) and an excluded fibromatosis patient (Fibr) compare Figure 2 of the main text.

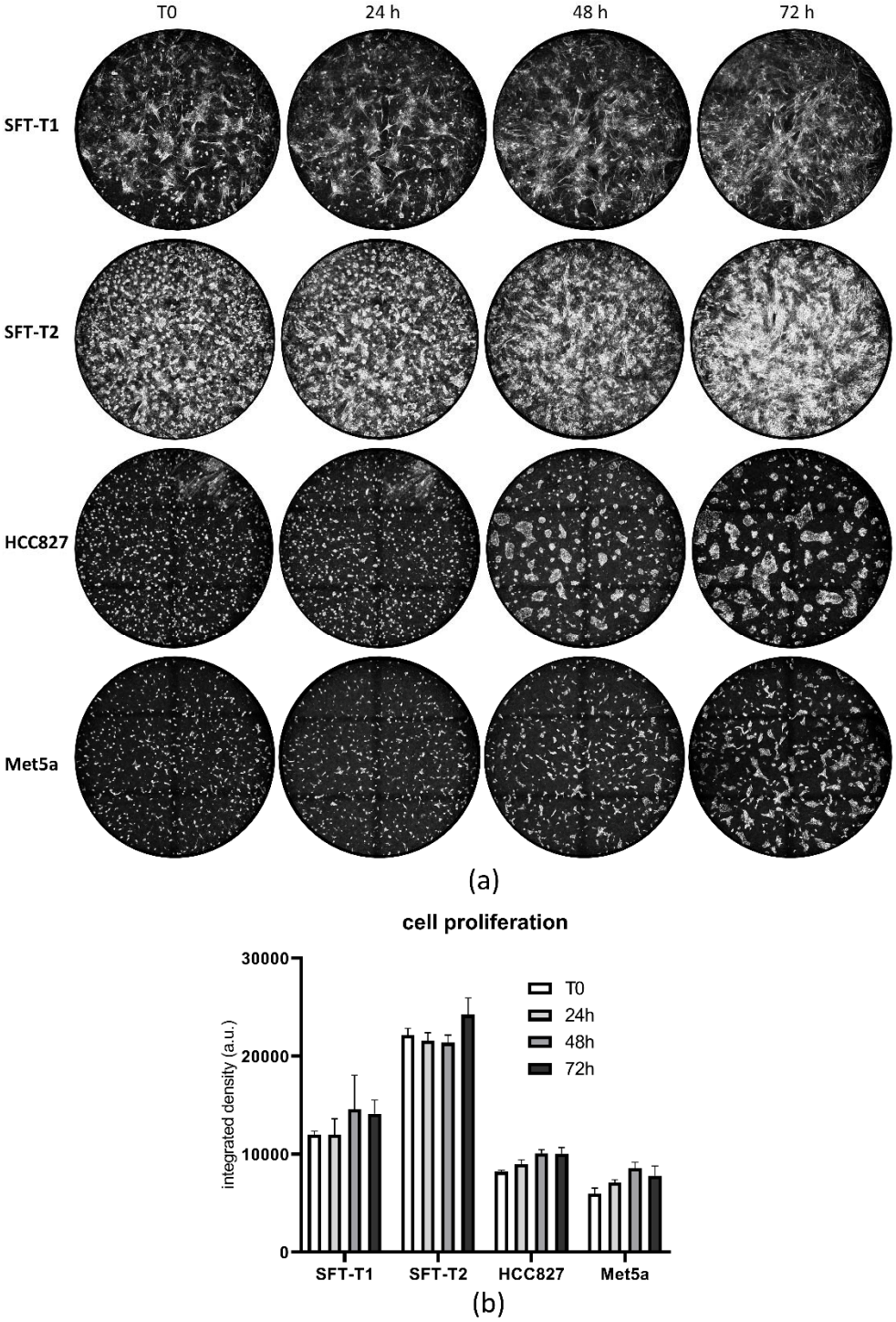

Figure S2. SFT-T1, SFT-T2, HCC827, and Met5a cells show stable *in vitro* growth. (**a**) Representative digital phase contrast images of respective cell lines after T0, 24, 48, and 72 h. (**b**) Quantification of pixel intensities of images shown in (a); n=3.

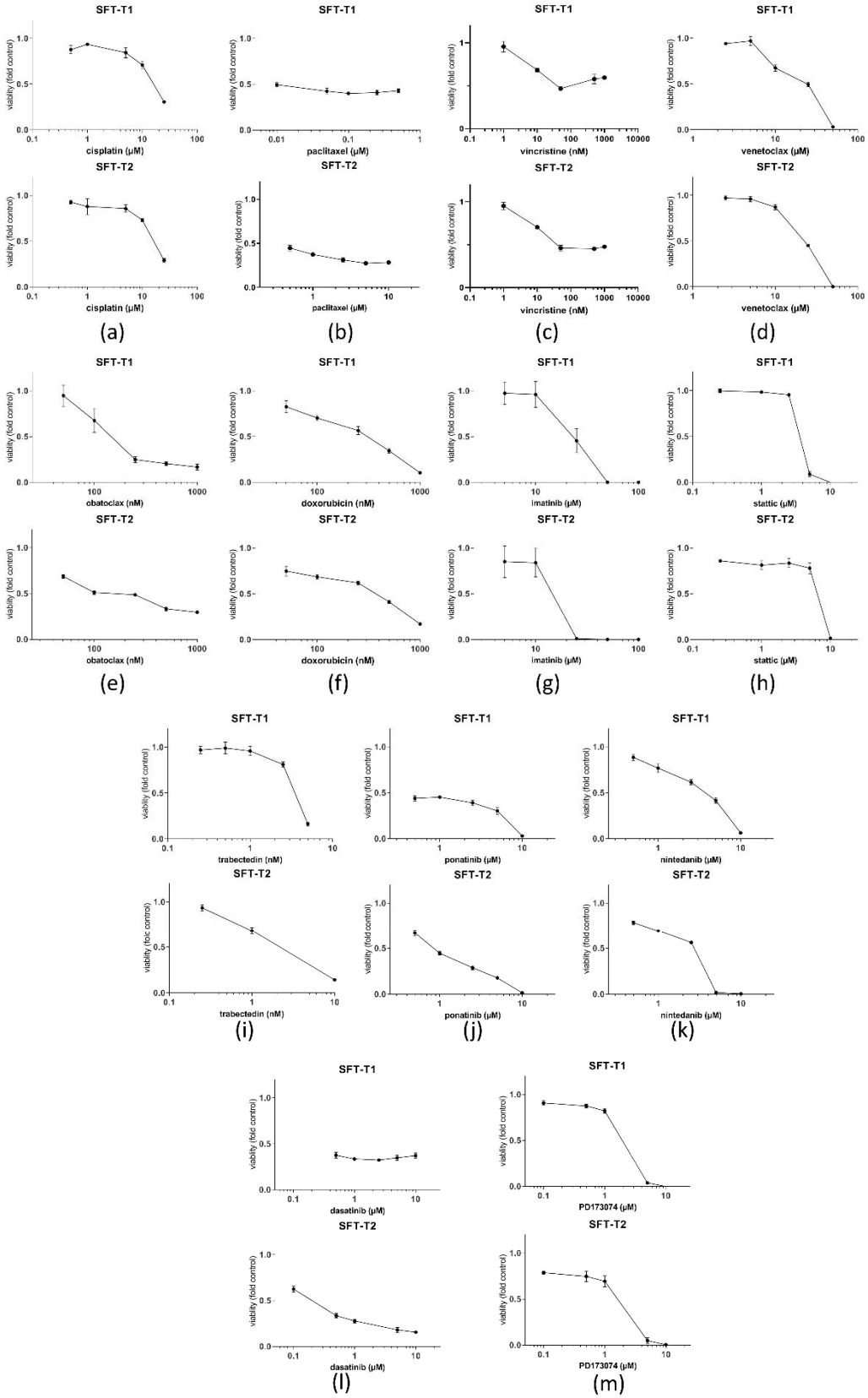

Figure S3. Representative *in vitro* dose-response curves of SFT-T1 (upper) and SFT-T2 (lower) cells after 72 h exposure to (**a**) cisplatin, (**b**) paclitaxel, (**c**) vincristine, (**d**) venetoclax, (**e**) obatoclax, (**f**) doxorubicin, (**g**) imatinib, (**h**) stattic, (**i**) trabectedin, (**j**) ponatinib, (**k**) nintedanib, (**l**) dasatinib, and (**m**) PD173074 determined by MTT assay.

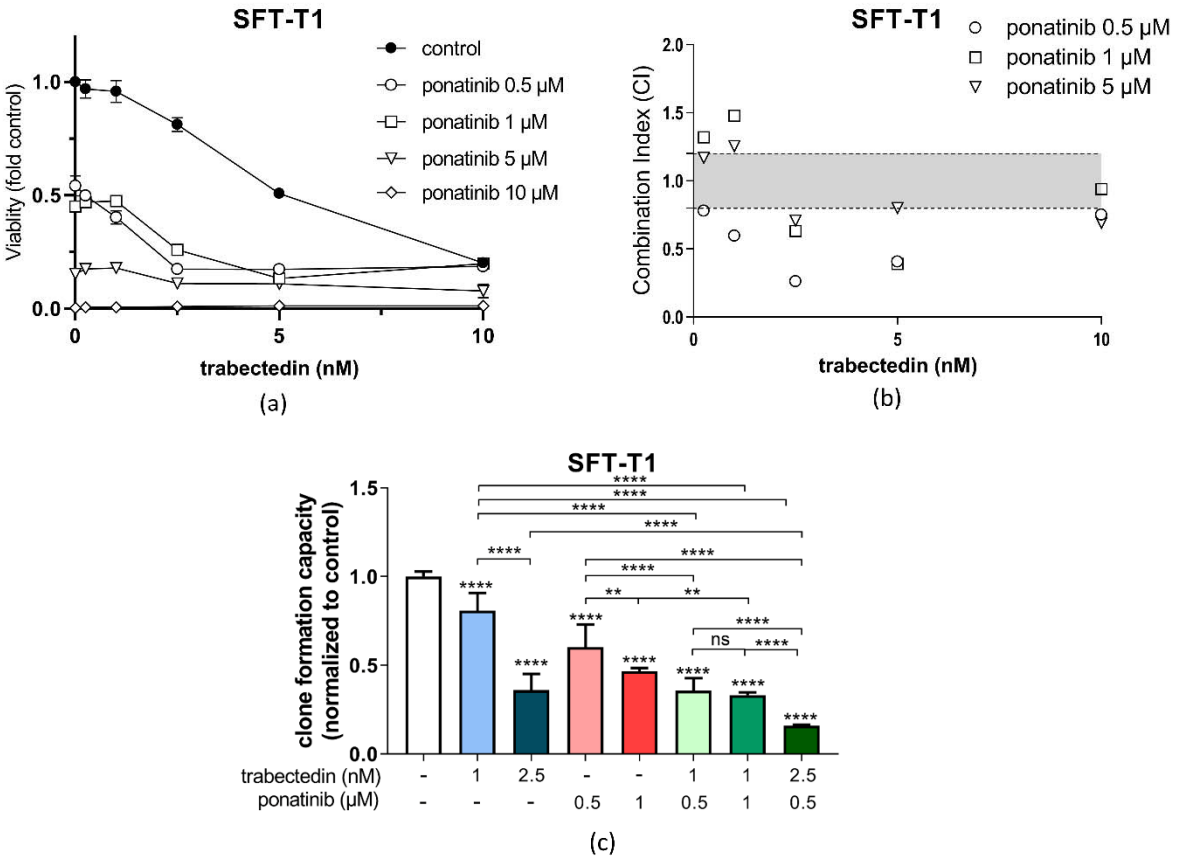

Figure S4. Ponatinib and trabectedin are active against low risk group SFT-T1 cell growth and synergize *in vitro*. (**a**) Combination of ponatinib with trabectedin shows synergistic anticancer activity. (**b**) Corresponding CI values. CI < 0.9, synergism; CI = 0.9-1.2, additive effects; or CI > 1.2 antagonism. (**c**) Quantification of effects of ponatinib and trabectedin as single agents and in combination on SFT-T1 clone formation capacity over a treatment period of nine days.

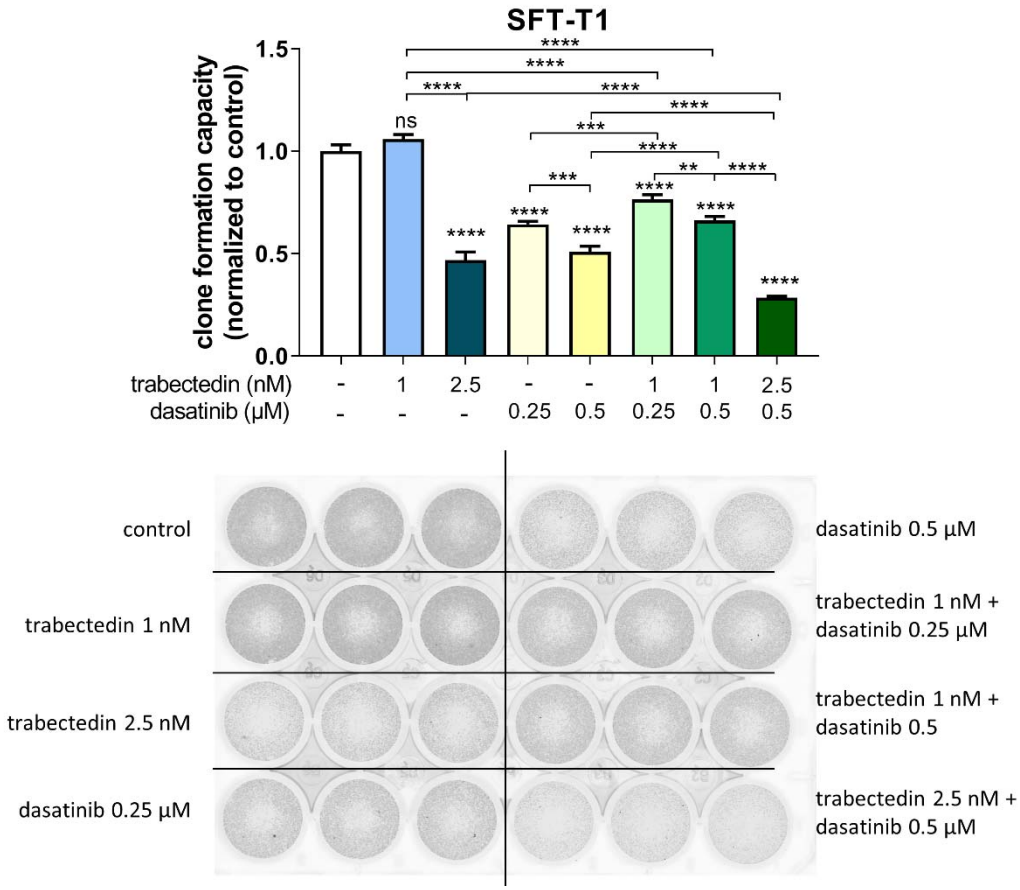

Figure S5. Dasatinib is active against SFT-T1 growth *in vitro* and enhances the anticancer activity of trabectedin. Effects of trabectedin as well as dasatinib as single agents and in combination on SFT clone formation capacity over a treatment period of nine days.

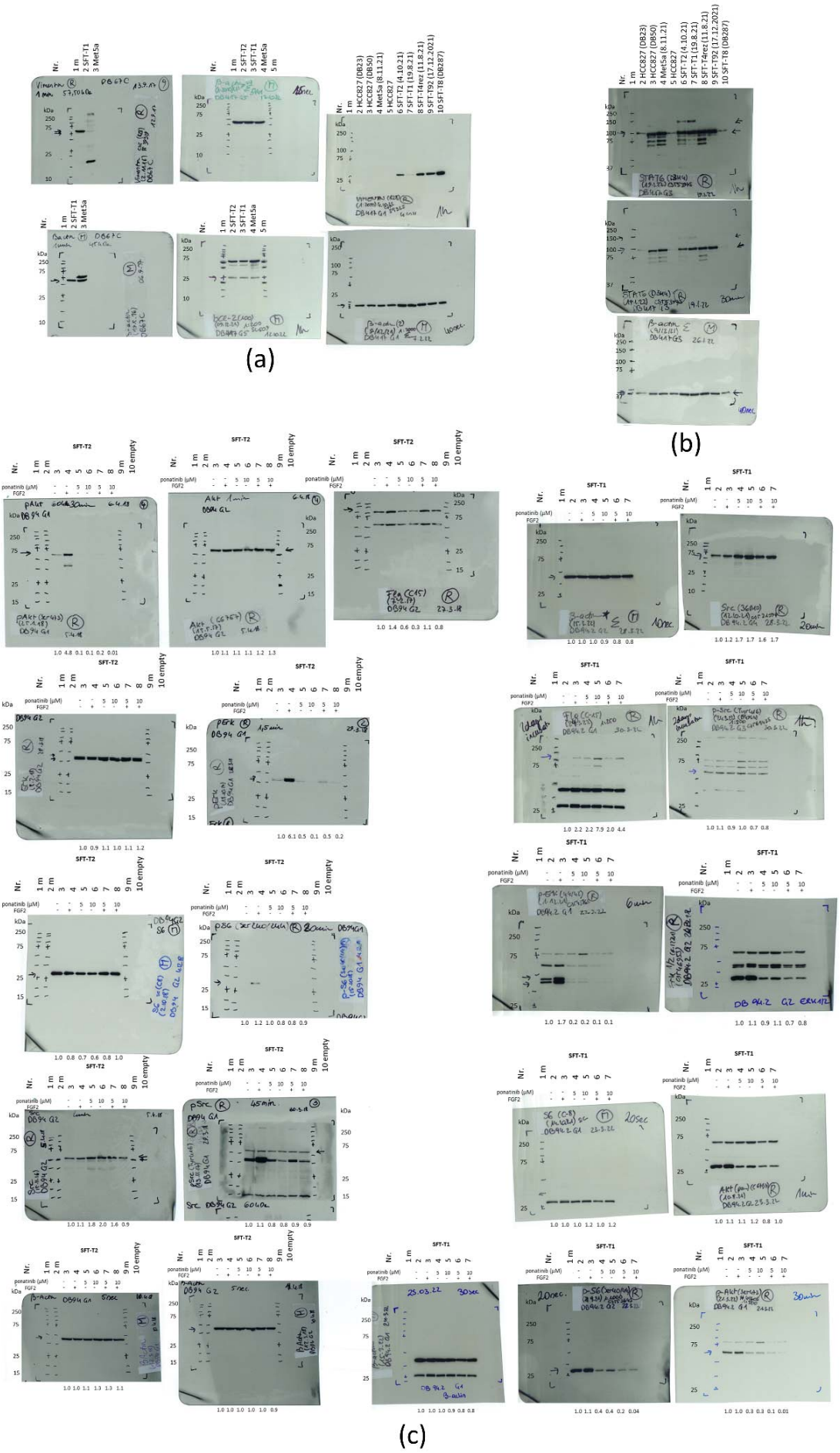
(a)
(b)
(c)
SFT-T2
SFT-T1
ponatinib (μM)
FGF2
kDa
Nr.
1 m
2 m
3
4
5
6
7
8
9 m
10 empty

Figure S6. Original Western blots of (**a**) Figure 3b, (**b**) Figure 3d, and (**c**) Figure 6.