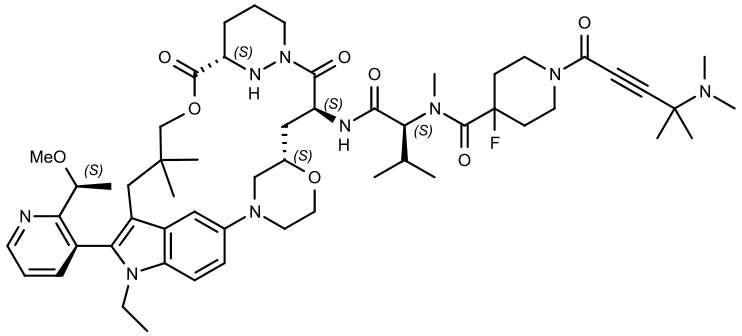
Claims

1. A crystalline solid form of Compound A:



Compound A

wherein the solid form is Form 1 having at least one peak at diffraction angle 2θ (°) of 4.4 ± 0.5, 4.6 ± 0.5, 5.1 ± 0.5, 7.5 ± 0.5, 9.4 ± 0.5, 9.8 ± 0.5, 10.3 ± 0.5, 10.7 ± 0.5, or 11.2 ± 0.5 as measured by X-ray diffractometry by irradiation with Cu Kα X-rays or calculated from X-ray diffractometry.

2. The crystalline solid form of claim 1, wherein the solid form has at least one peak at diffraction angle 2θ (°) of 4.4 ± 0.5, 4.6 ± 0.5, or 5.1 ± 0.5 as measured by X-ray diffractometry by irradiation with Cu Kα X-rays or calculated from X-ray diffractometry.

3. The crystalline solid form of claim 1, wherein the solid form has peaks at diffraction angles 2θ (°) of 4.4 ± 0.5, 4.6 ± 0.5, and 5.1 ± 0.5 as measured by X-ray diffractometry by irradiation with Cu Kα X-rays or calculated from X-ray diffractometry.

4. The crystalline solid form of claim 1, wherein the solid form has peaks at diffraction angles 2θ (°) of 7.5 ± 0.5, 9.4 ± 0.5, and 9.8 ± 0.5 as measured by X-ray diffractometry by irradiation with Cu Kα X-rays or calculated from X-ray diffractometry.

5. The crystalline solid form of claim 1, wherein the solid form has peaks at diffraction angles 2θ (°) of 4.4 ± 0.5, 4.6 ± 0.5, 5.1 ± 0.5, 7.5 ± 0.5, 9.4 ± 0.5, and 9.8 ± 0.5, as measured by X-ray diffractometry by irradiation with Cu Kα X-rays or calculated from X-ray diffractometry.

6. The crystalline solid form of claim 1, wherein the solid form has peaks at diffraction angles 2θ (°) of 10.3 ± 0.5, 10.7 ± 0.5, and 11.2 ± 0.5 as measured by X-ray diffractometry by irradiation with Cu Kα X-rays or calculated from X-ray diffractometry.

7. The crystalline solid form of claim 1, wherein the solid form has peaks at diffraction angles 2θ (°) of 4.4 ± 0.5, 4.6 ± 0.5, 5.1 ± 0.5, 7.5 ± 0.5, 9.4 ± 0.5, 9.8 ± 0.5, 10.3 ± 0.5, 10.7 ± 0.5, and 11.2 ± 0.5 as measured by X-ray diffractometry by irradiation with Cu Kα X-rays or calculated from X-ray diffractometry.

8. The crystalline solid form of any one of claims 1 to 7, wherein the solid form has a differential scanning calorimetry (DSC) profile with an endothermic onset at 163.4 °C ± 0.5.

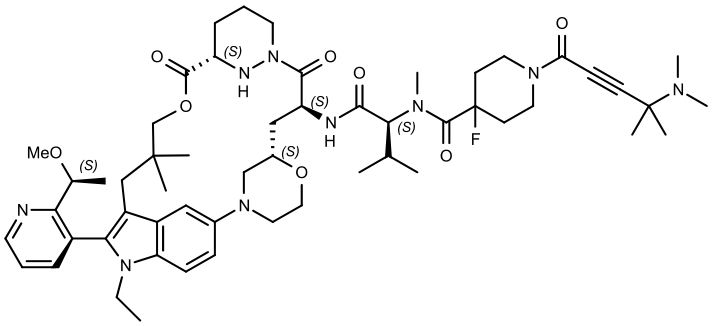
9. The crystalline solid form of any one of claims 1 to 7, wherein the solid form has a thermogravimetric analysis (TGA) profile that exhibits a weight loss of 0.4% ± 0.5 (w/w) between ambient and 150.0 °C ± 0.5, or a weight loss of 0.5% ± 0.5 (w/w) between ambient and 200.0 °C ± 0.5.

10. A pharmaceutical composition comprising the crystalline solid form of any one of claims 1 to 7 and a pharmaceutically acceptable excipient.

11. Use of the pharmaceutical composition of claim 10 in the manufacture of a medicament for treating cancer.

12. Use of the pharmaceutical composition of claim 10 in the manufacture of a medicament for treating a Ras protein-related disorder.

13. A mixture of crystalline solid forms of Compound A:



Compound A

wherein:

the mixture comprises Form 1 and Form 2; and

the mixture has at least one peak at diffraction angle 2θ (°) of 4.4 ± 0.5, 4.6 ± 0.5, 4.8 ± 0.5, 5.1 ± 0.5, 6.1 ± 0.5, 7.4 ± 0.5, 8.0 ± 0.5, 9.4 ± 0.5, or 10.3 ± 0.5 as measured by X-ray diffractometry by irradiation with Cu Kα X-rays or calculated from X-ray diffractometry.

14. The mixture of crystalline solid forms of claim 13, wherein the mixture has a peak at diffraction angle 2θ (°) of 4.8 ± 0.5 as measured by X-ray diffractometry by irradiation with Cu Kα X-rays or calculated from X-ray diffractometry.

15. The mixture of crystalline solid forms of claim 13, wherein the mixture has peaks at diffraction angles 2θ (°) of 4.4 ± 0.5, 4.6 ± 0.5, and 4.8 ± 0.5 as measured by X-ray diffractometry by irradiation with Cu Kα X-rays or calculated from X-ray diffractometry.

16. The mixture of crystalline solid forms of claim 14, wherein the mixture has peaks at diffraction angles 2θ (°) of 5.1 ± 0.5, 6.1 ± 0.5, and 7.4 ± 0.5 as measured by X-ray diffractometry by irradiation with Cu Kα X-rays or calculated from X-ray diffractometry.

17. The mixture of crystalline solid forms of claim 13, wherein the mixture has peaks at diffraction angles 2θ (°) of 4.4 ± 0.5, 4.6 ± 0.5, 4.8 ± 0.5, 5.1 ± 0.5, 6.1 ± 0.5, and 7.4 ± 0.5 as measured by X-ray diffractometry by irradiation with Cu Kα X-rays or calculated from X-ray diffractometry.

18. The mixture of crystalline solid forms of claim 14, wherein the mixture has peaks at diffraction angles 2θ (°) of 8.0 ± 0.5, 9.4 ± 0.5, and 10.3 ± 0.5 as measured by X-ray diffractometry by irradiation with Cu Kα X-rays or calculated from X-ray diffractometry.

19. The mixture of crystalline solid forms of claim 13, wherein the mixture has peaks at diffraction angles 2θ (°) of 4.4 ± 0.5, 4.6 ± 0.5, 4.8 ± 0.5, 5.1 ± 0.5, 6.1 ± 0.5, 7.4 ± 0.5, 8.0 ± 0.5, 9.4 ± 0.5, and 10.3 ± 0.5 as measured by X-ray diffractometry by irradiation with Cu Kα X-rays or calculated from X-ray diffractometry.

20. The mixture of crystalline solid forms of any one of claims 13 to 19, wherein the mixture has a differential scanning calorimetry (DSC) profile with endothermic peaks at 69.1 °C ± 0.5 and 171.4 °C ± 0.5.

21. The mixture of crystalline solid forms of any one of claims 13 to 19, wherein the mixture has a thermogravimetric analysis (TGA) profile exhibiting weight loss of 0.71% ± 0.5 (w/w) between ambient and 150.0 °C ± 0.5, or weight loss of 0.74% ± 0.5 (w/w) between ambient and 200.0 °C ± 0.5.

22. A pharmaceutical composition comprising the mixture of crystalline solid forms of any one of claims 13 to 19 and a pharmaceutically acceptable carrier or excipient.

23. Use of the pharmaceutical composition of claim 22 in the manufacture of a medicament for treating cancer.

24. Use of the pharmaceutical composition of claim 22 in the manufacture of a medicament for treating a Ras protein-related disorder.