

Support Information

Discovery of dihydrospiro [cyclopropane-1,7'-pyrrolo[3,4-d] pyrimidine] derivatives as novel ATR inhibitors

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Yubo Zhou,^{b,*} Jia Li,^{b,c,*} and Tao Liu ^{a,*}

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^b Zhongshan Institute for Drug Discovery, Shanghai Institute of Materia Medica, Chinese Academy of Sciences, Zhongshan 528400, China.

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[†] These authors contributed equally to this work.

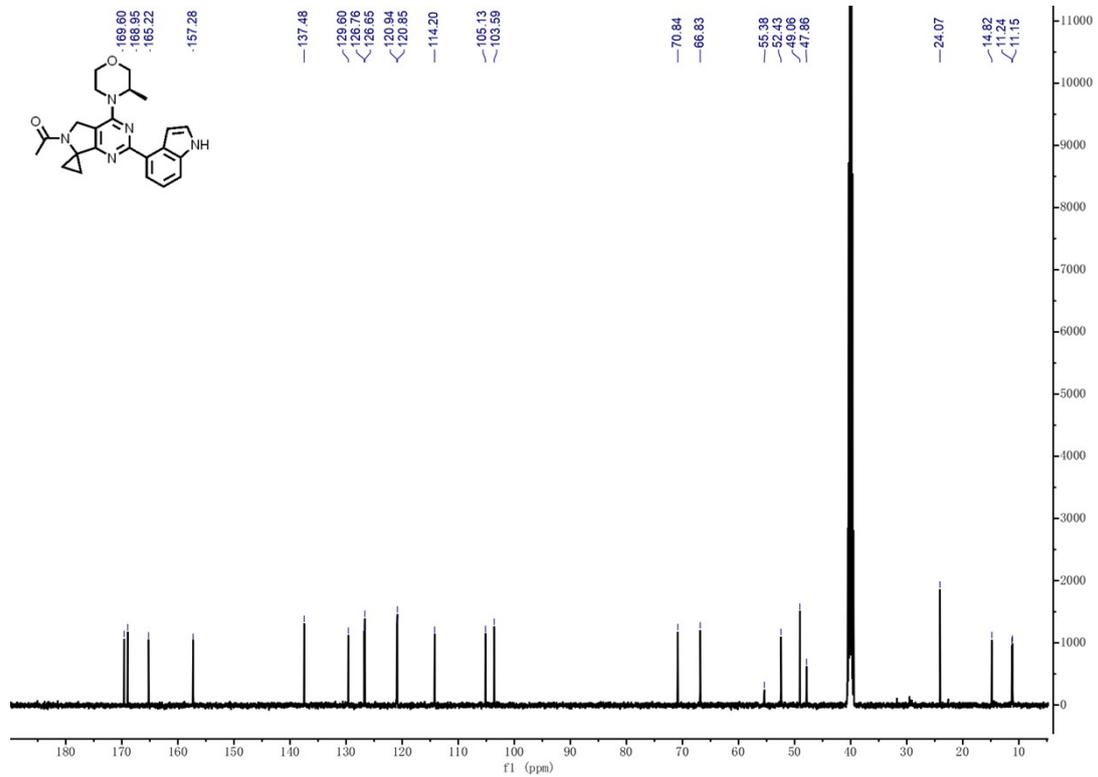
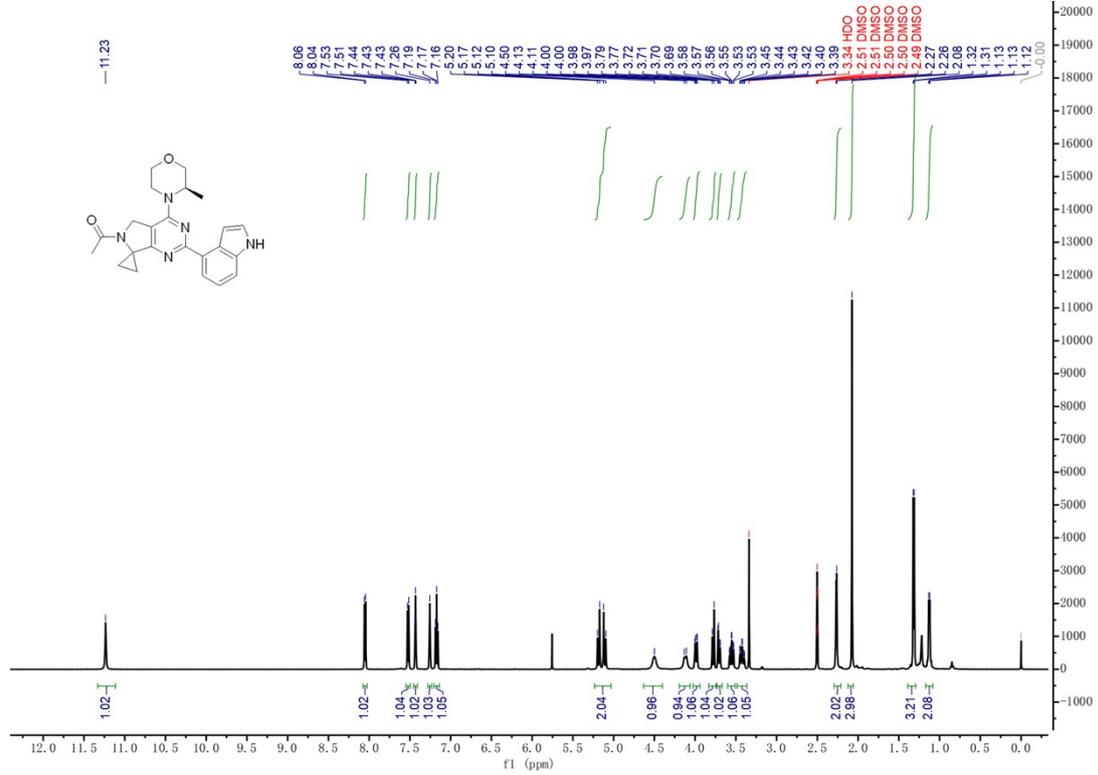
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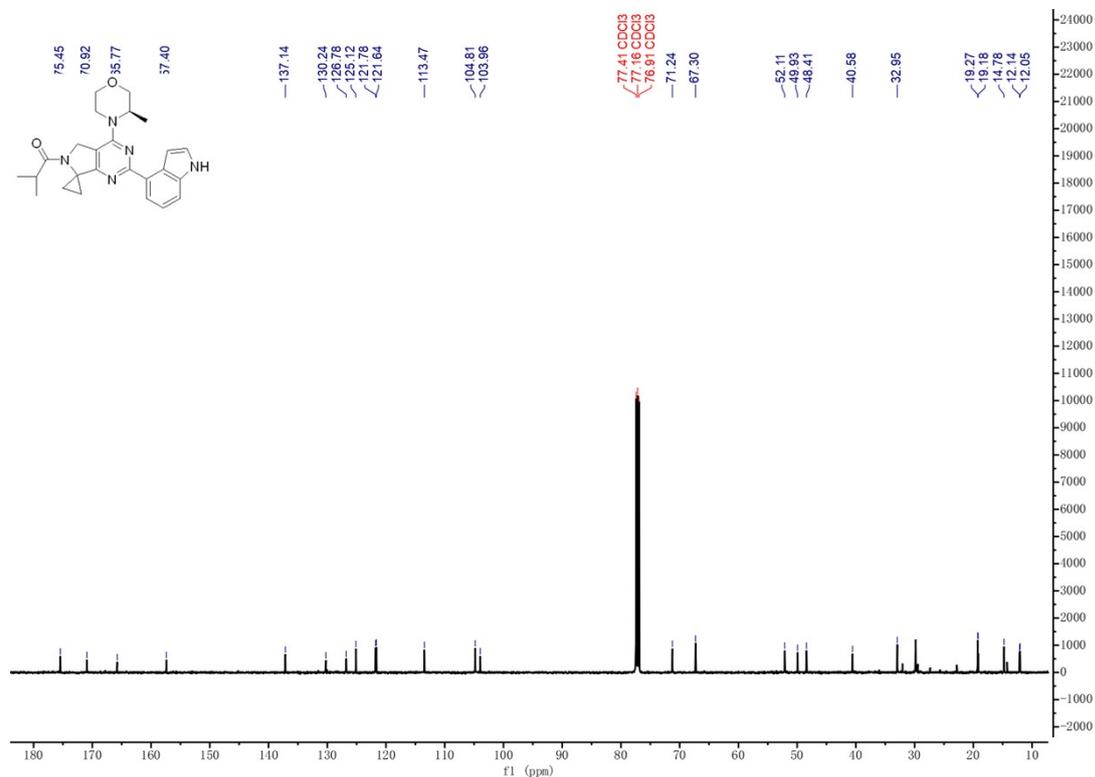
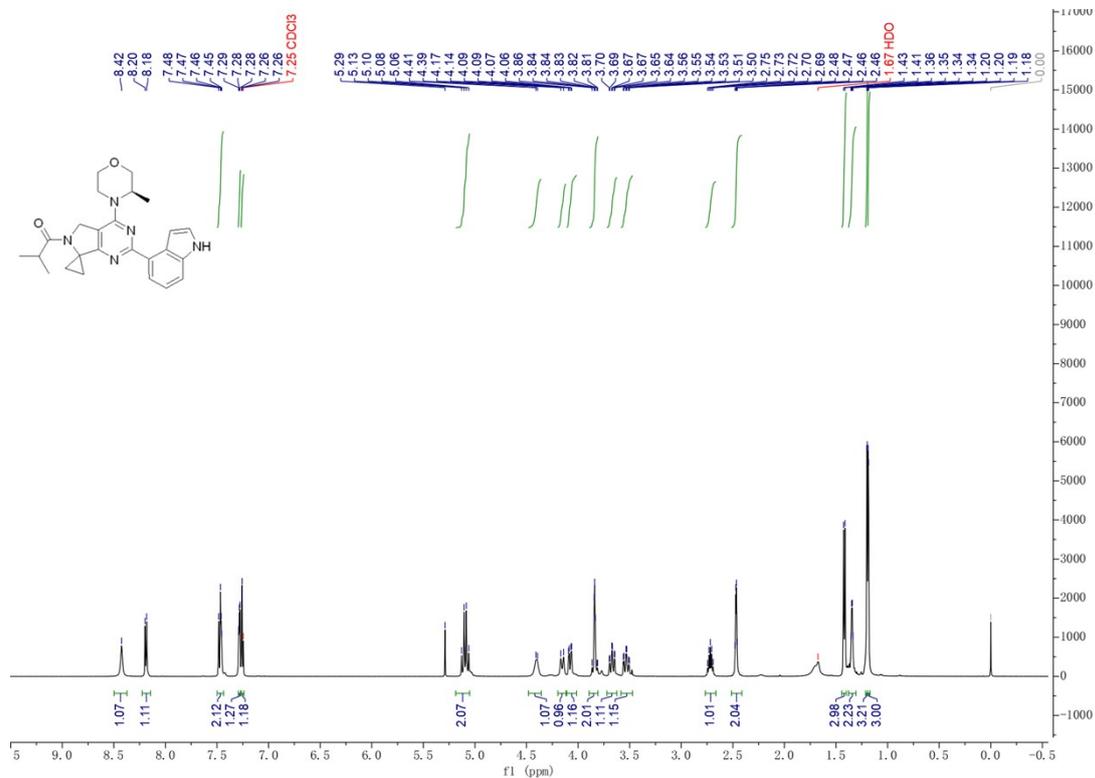
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NMR spectra

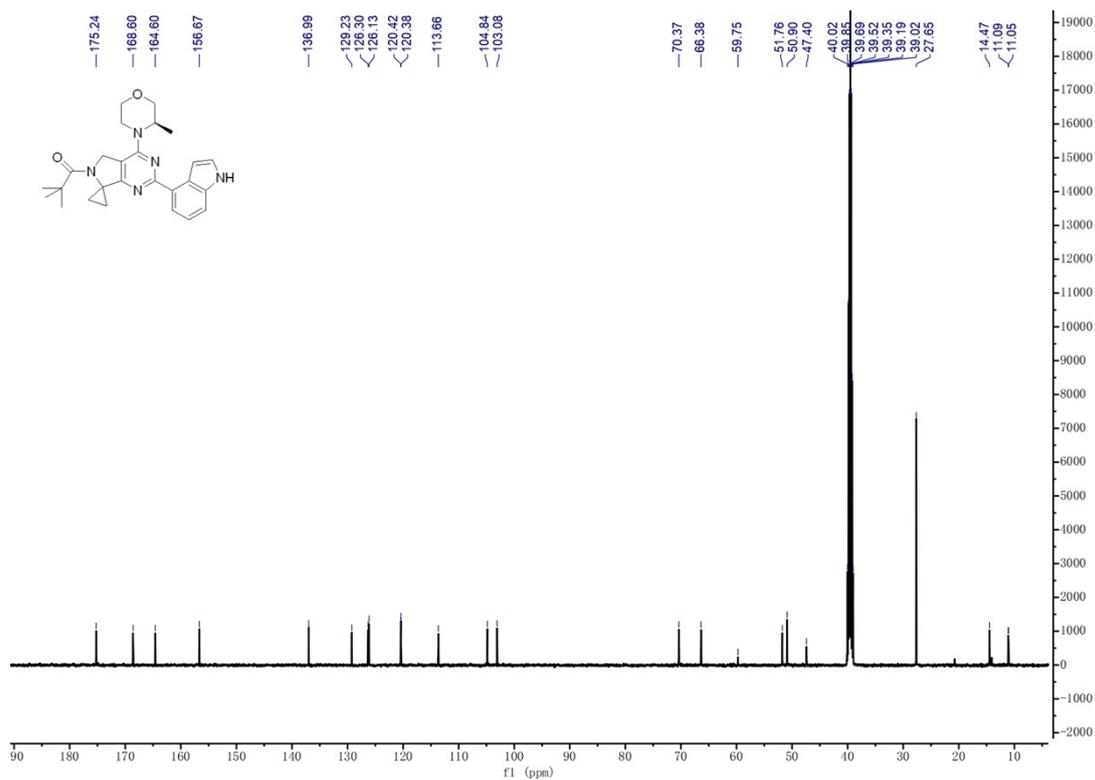
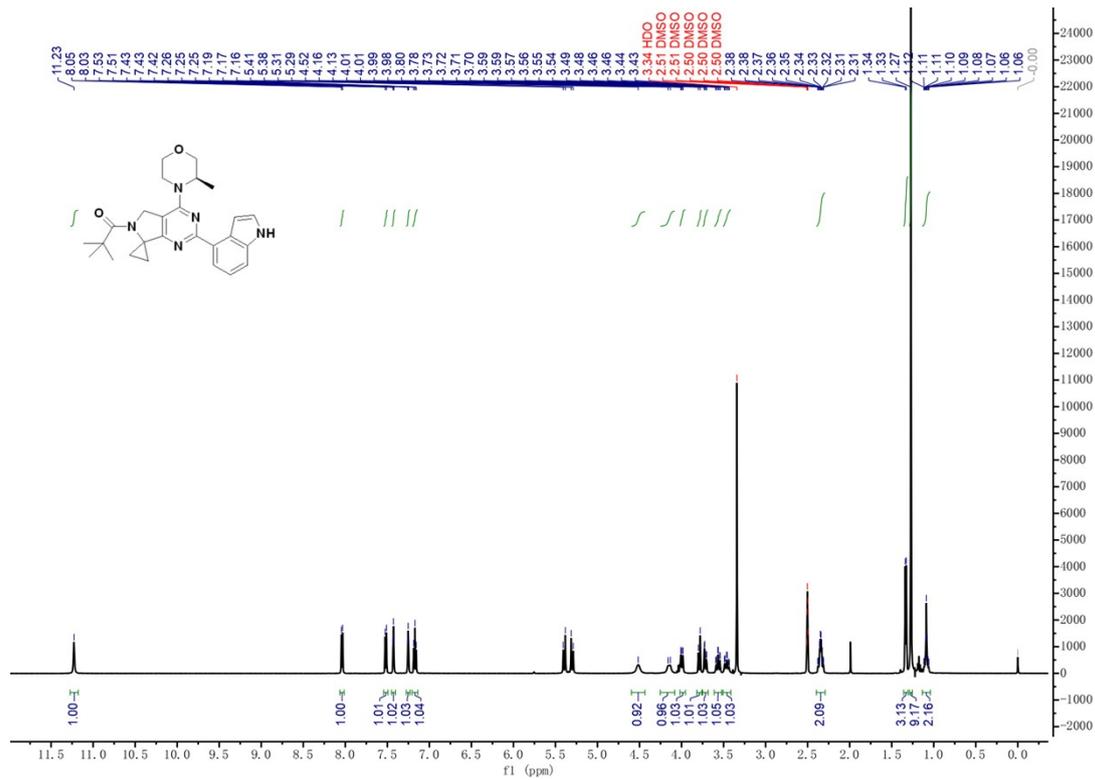
(R)-1-(2'-(1H-indol-4-yl)-4'-(3-methylmorpholino)spiro[cyclopropane-1,7'-pyrrolo[3,4-d]pyrimidin]-6'(5'H)-yl)ethan-1-one



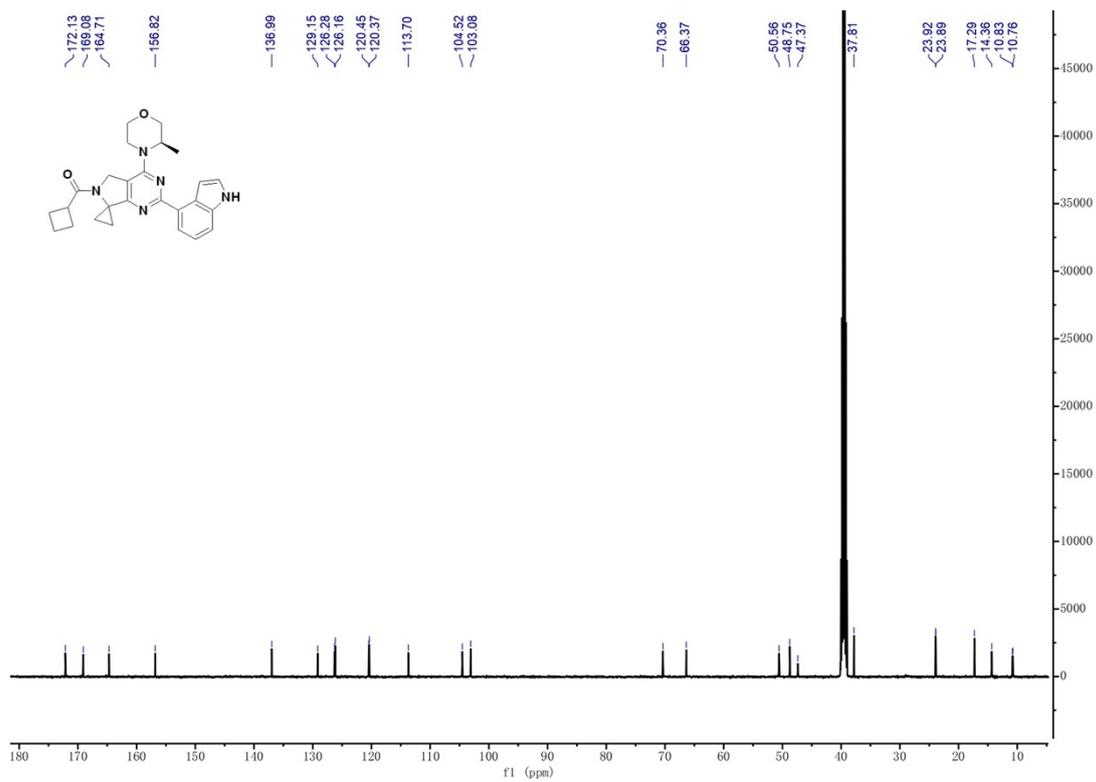
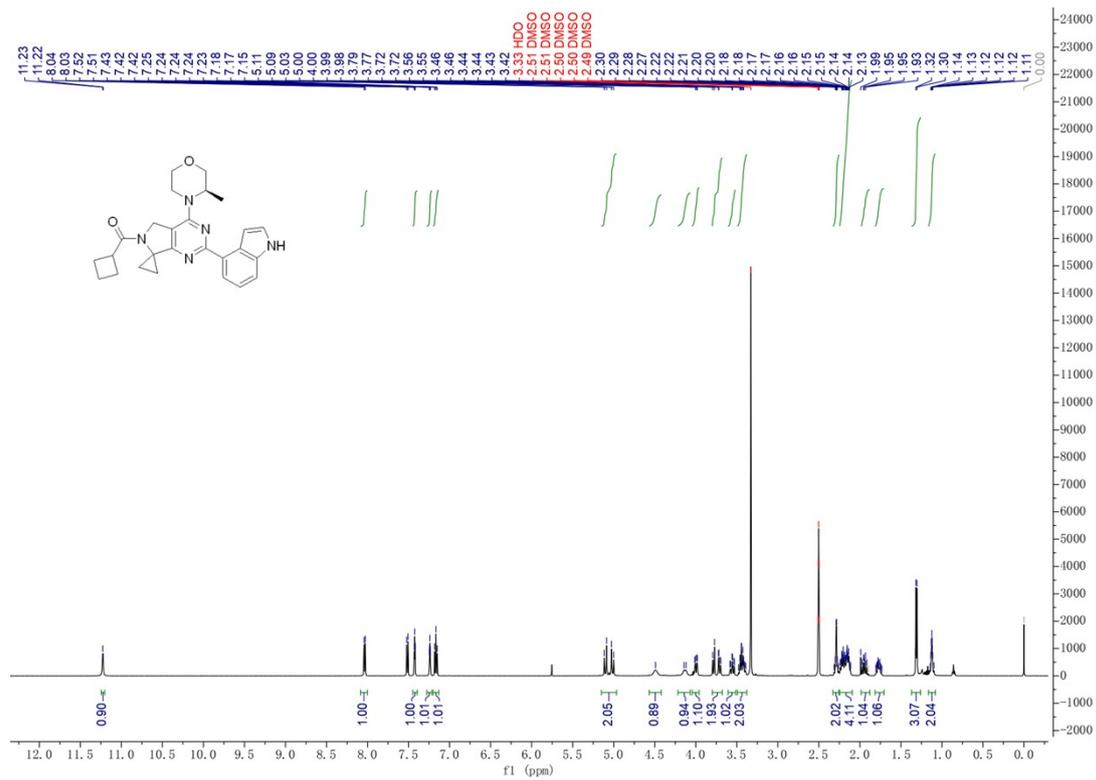
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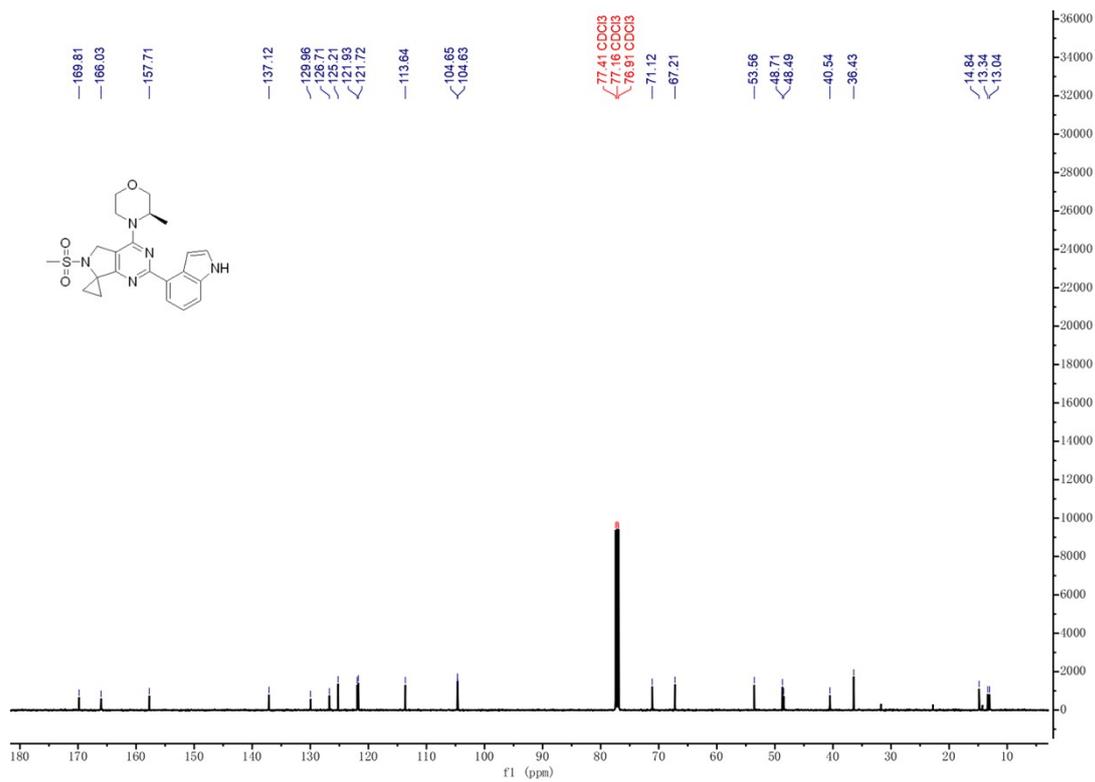
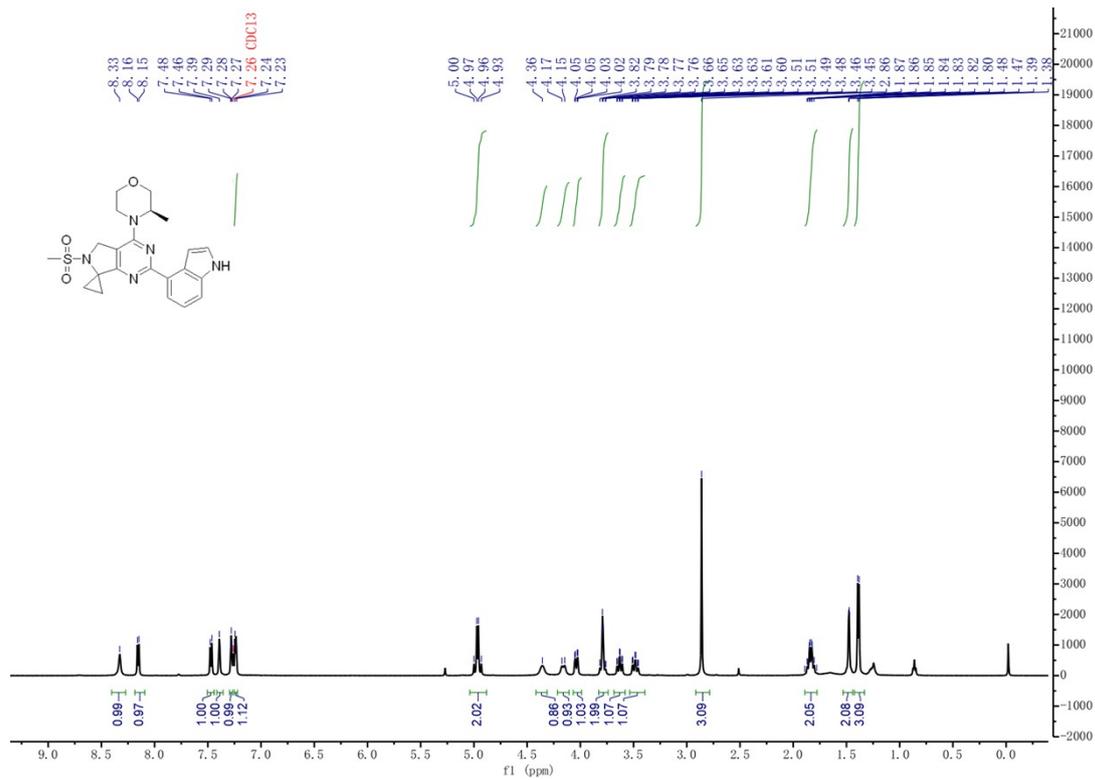
(R)-1-(2'-(1H-indol-4-yl)-4'-(3-methylmorpholino)spiro[cyclopropane-1,7'-pyrrolo[3,4-d]pyrimidin]-6'(5'H)-yl)-2,2-dimethylpropan-1-one



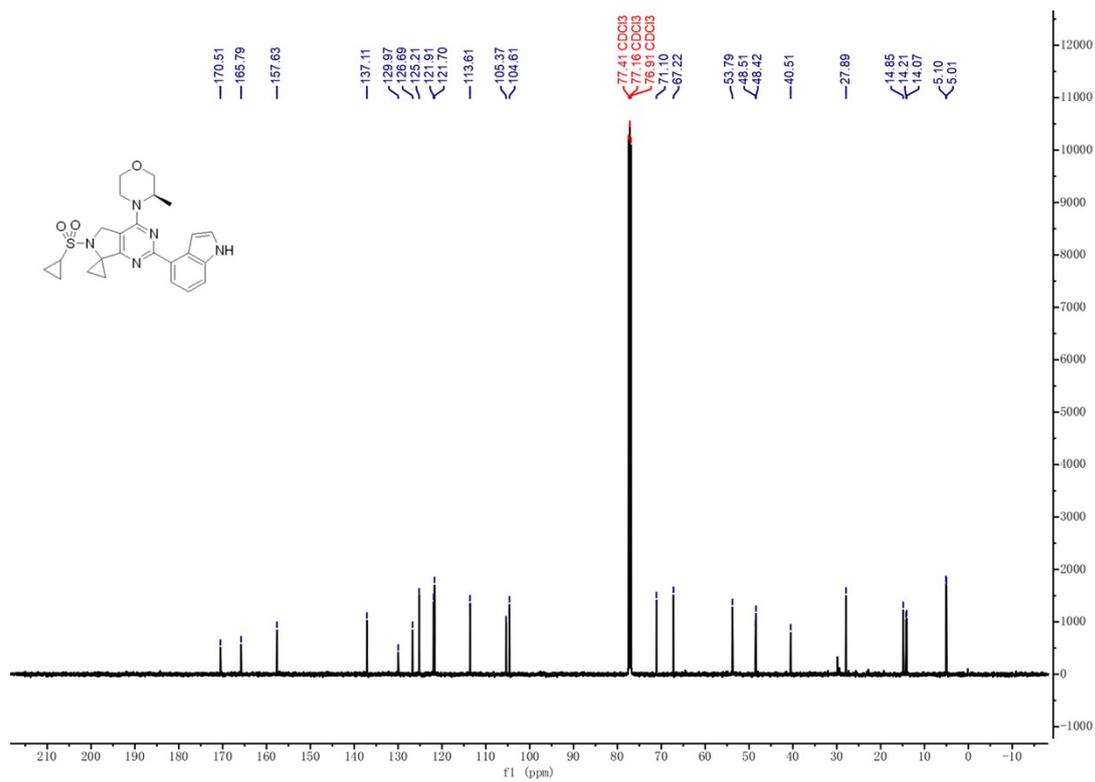
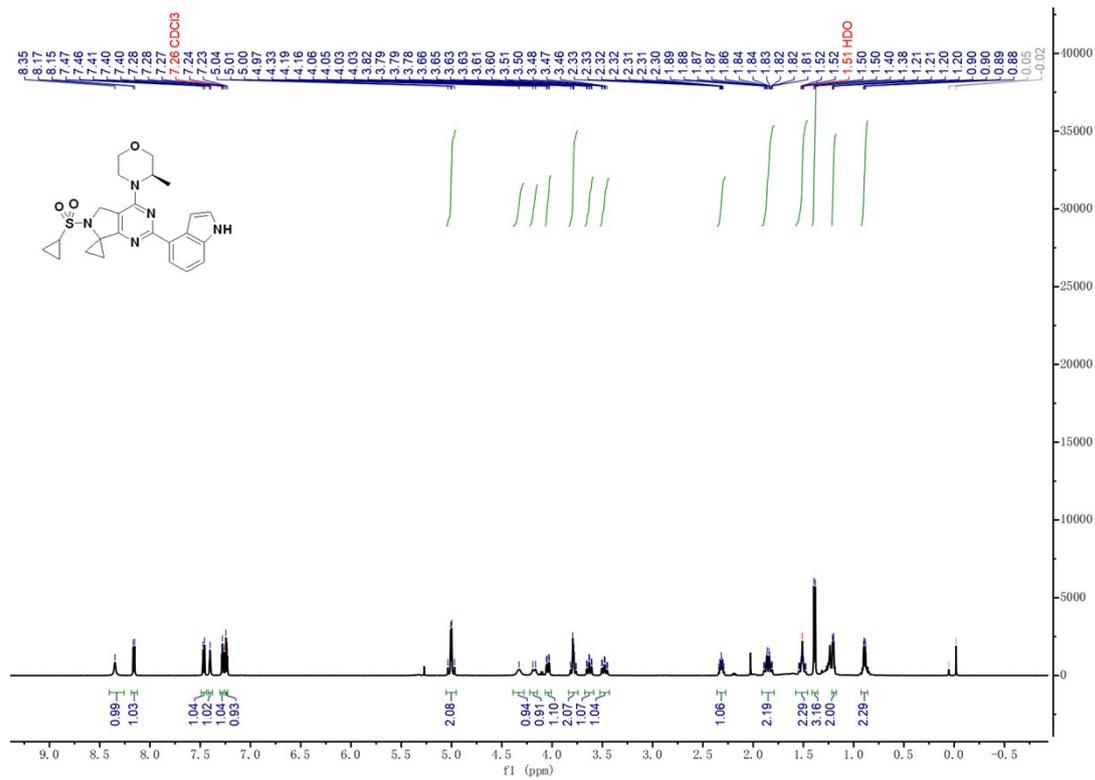
(R)-(2'-(1H-indol-4-yl)-4'-(3-methylmorpholino)spiro[cyclopropane-1,7'-pyrrolo[3,4-d]pyrimidin]-6'(5'H)-yl)(cyclopropyl)methanone



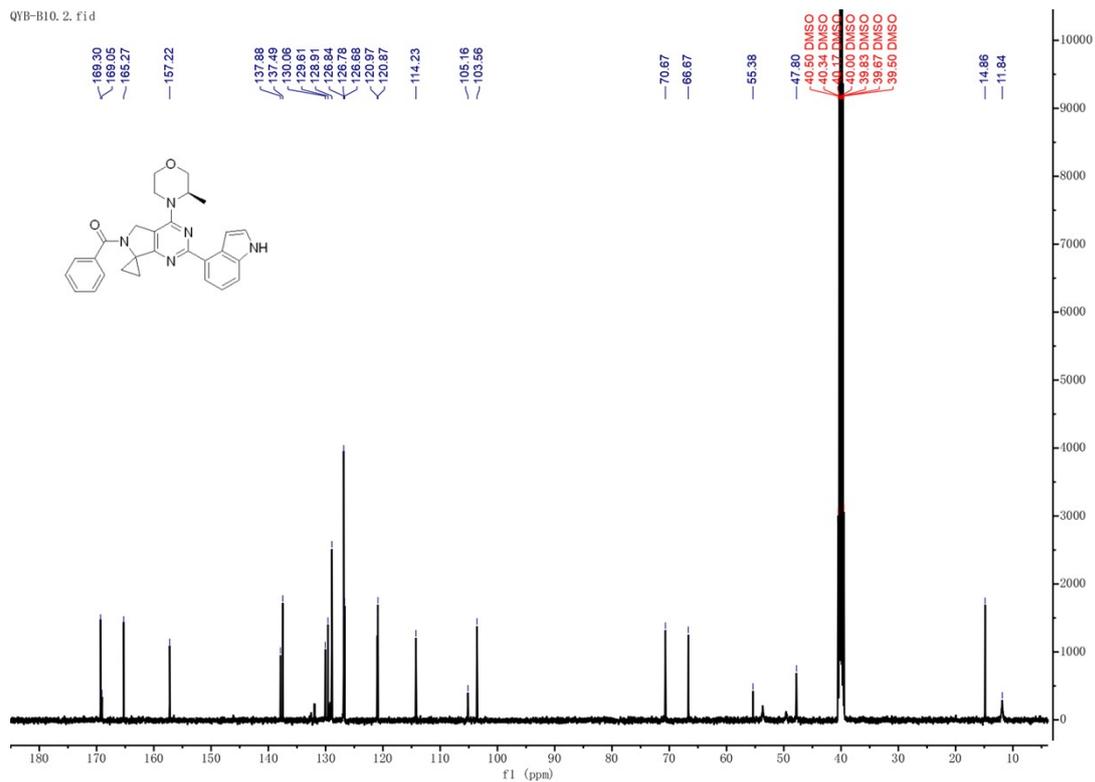
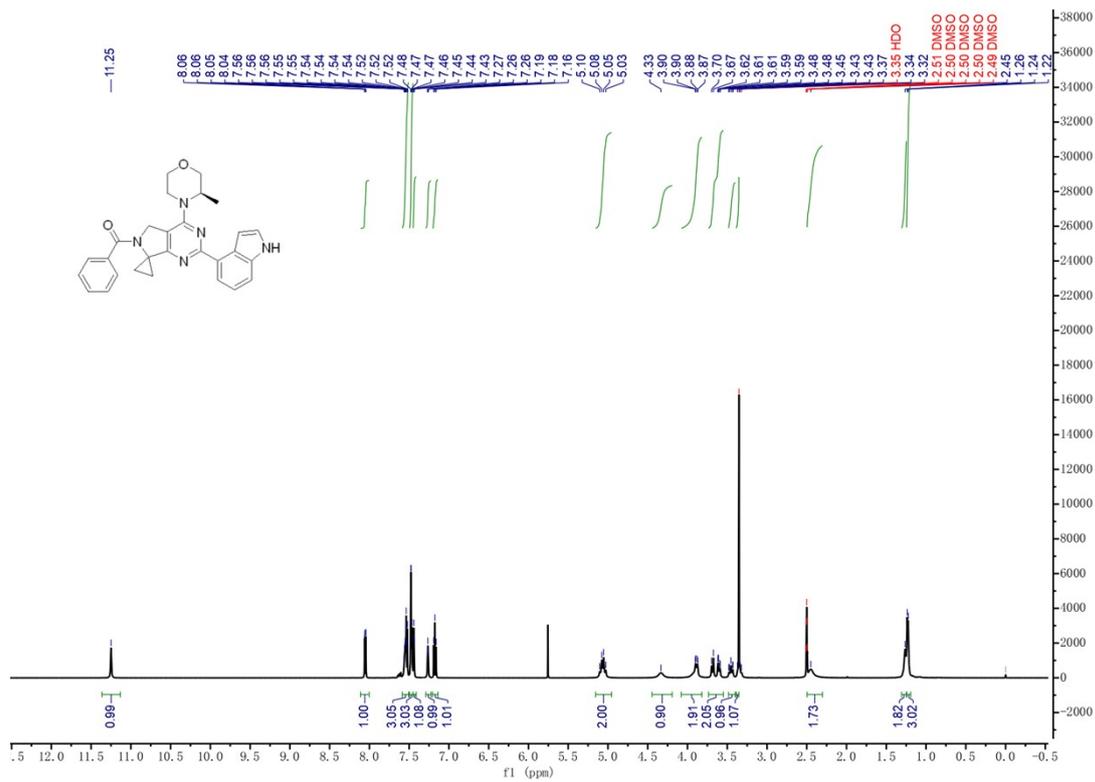
(R)-(2'-(1H-indol-4-yl)-4'-(3-methylmorpholino)spiro[cyclopropane-1,7'-pyrrolo[3,4-d]pyrimidin]-6'(5'H)-yl)(cyclohexyl)methanone



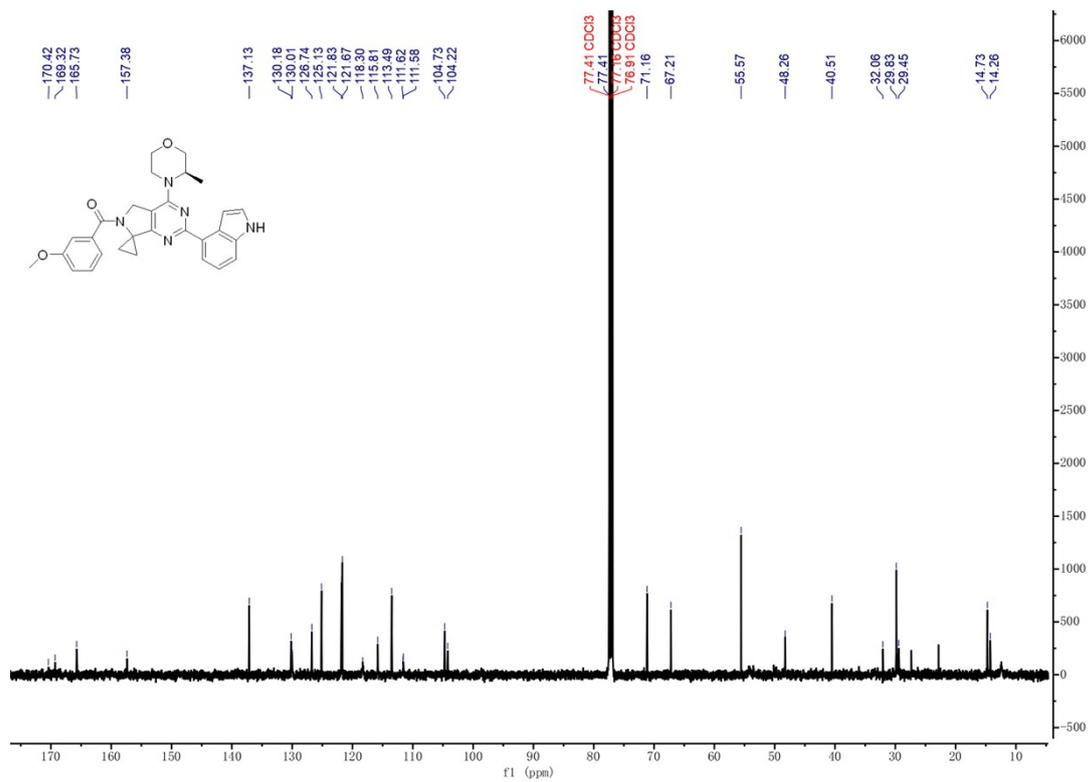
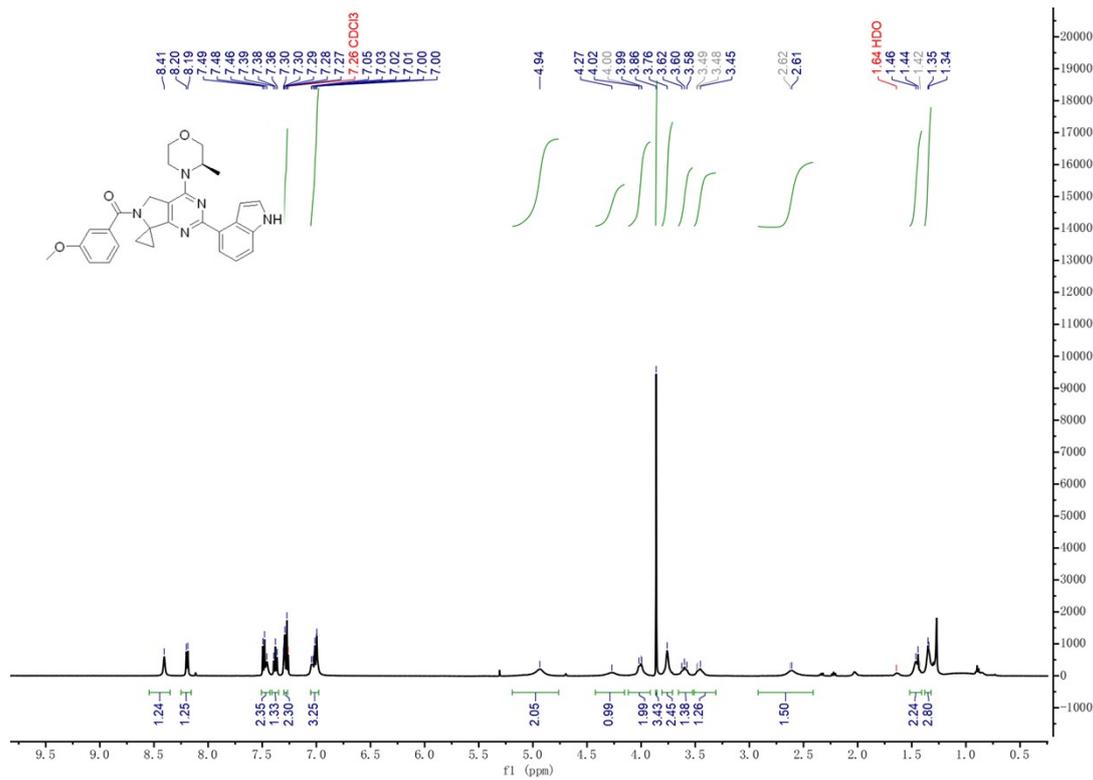
(R)-4-(6-(cyclopropylsulfonyl)-2'-(1H-indol-4-yl)-5',6'-dihydrospiro[cyclopropane-1,7'-pyrrolo[3,4-d]pyrimidin]-4'-yl)-3-methylmorpholine



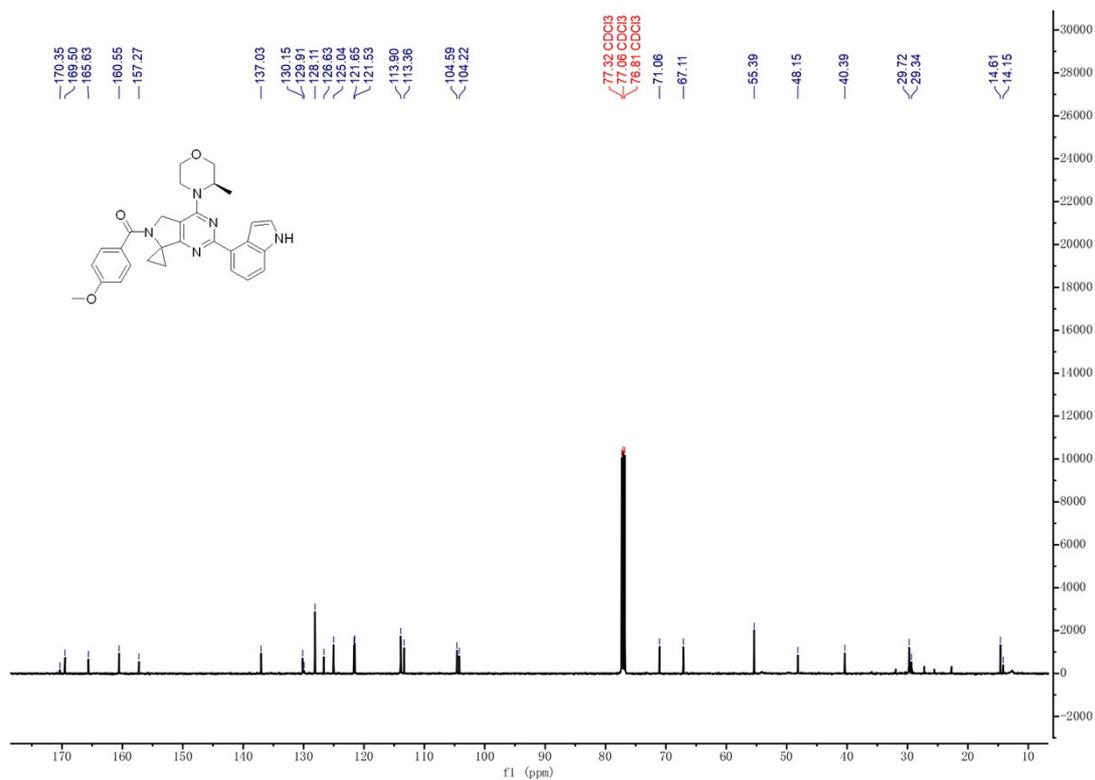
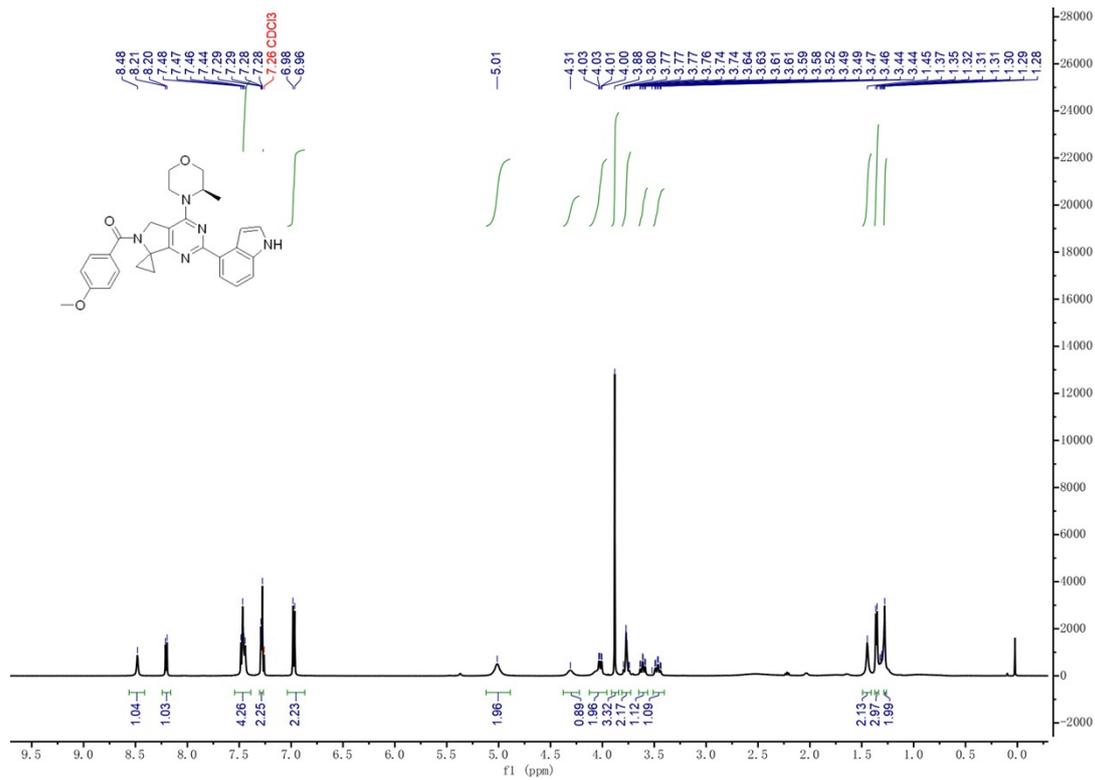
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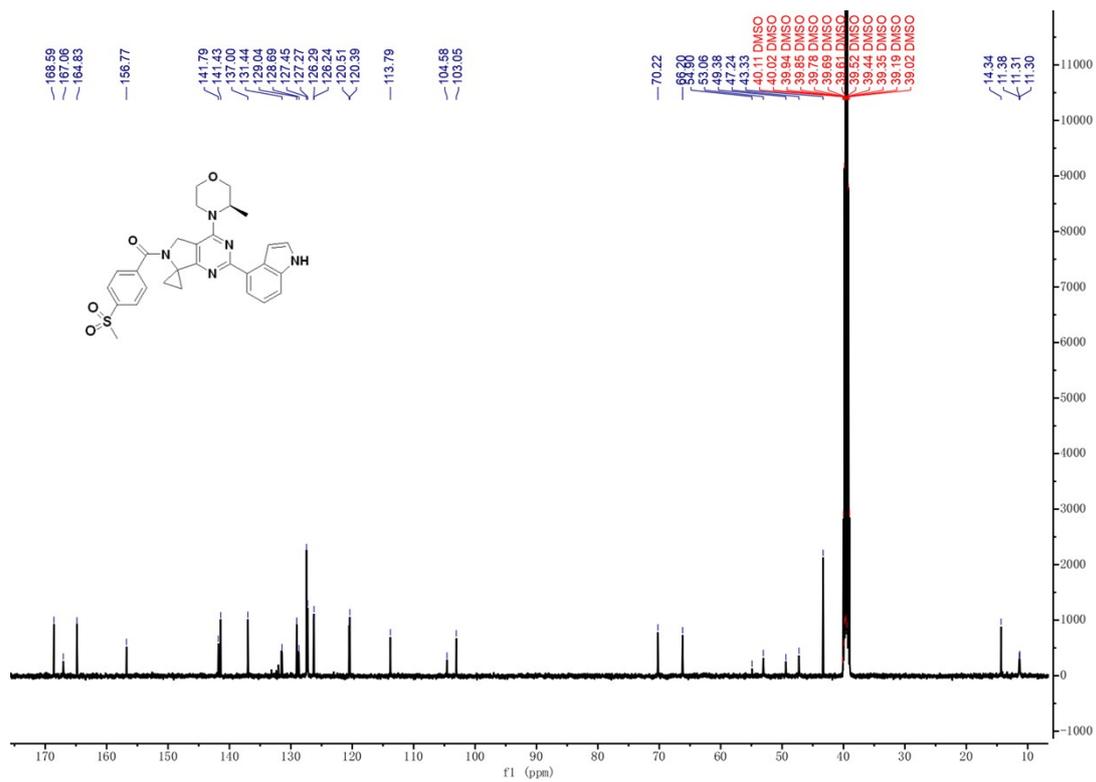
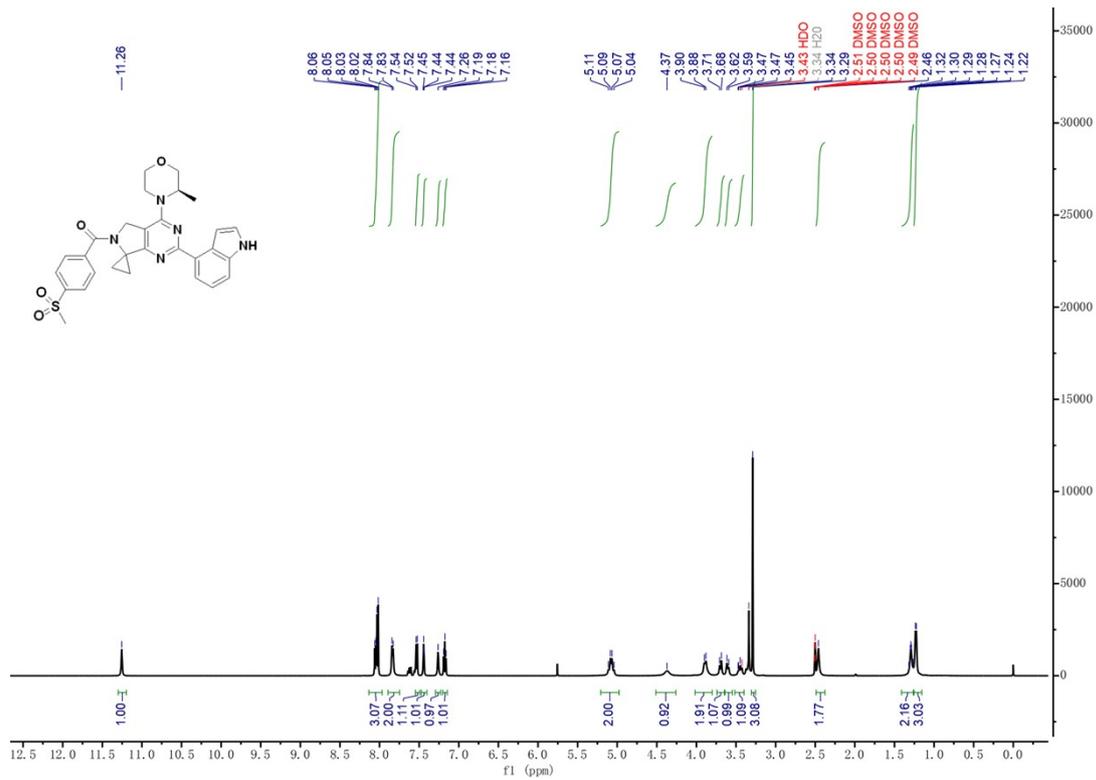
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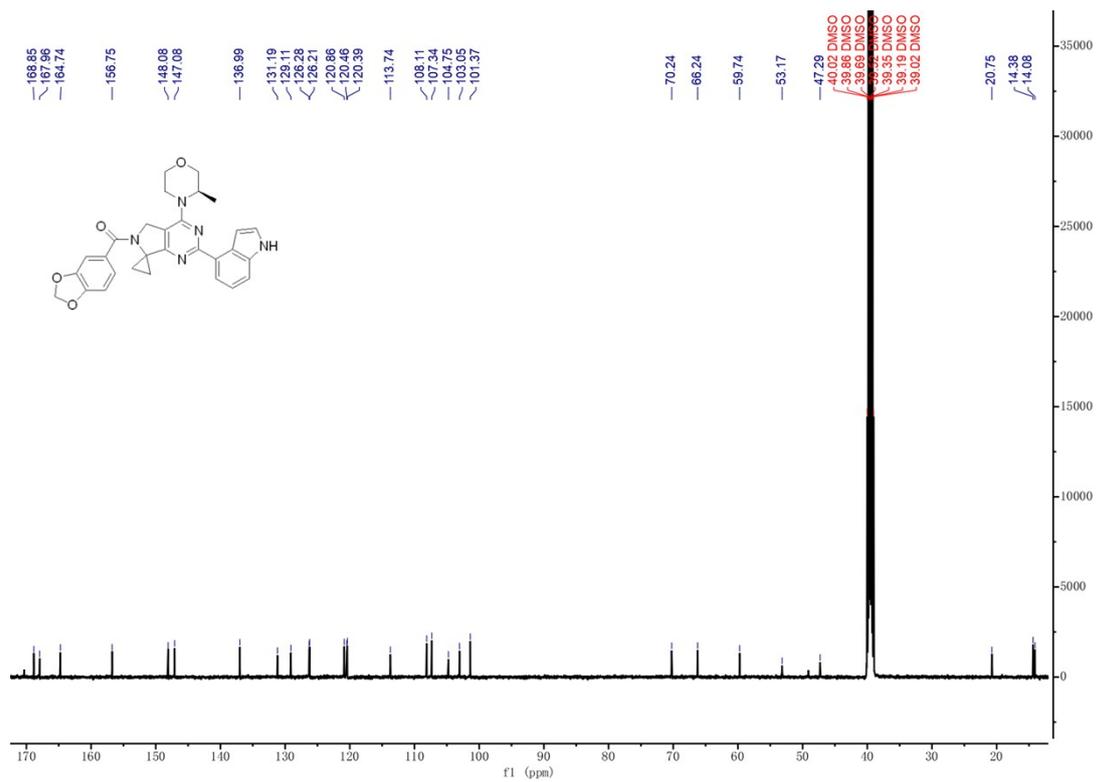
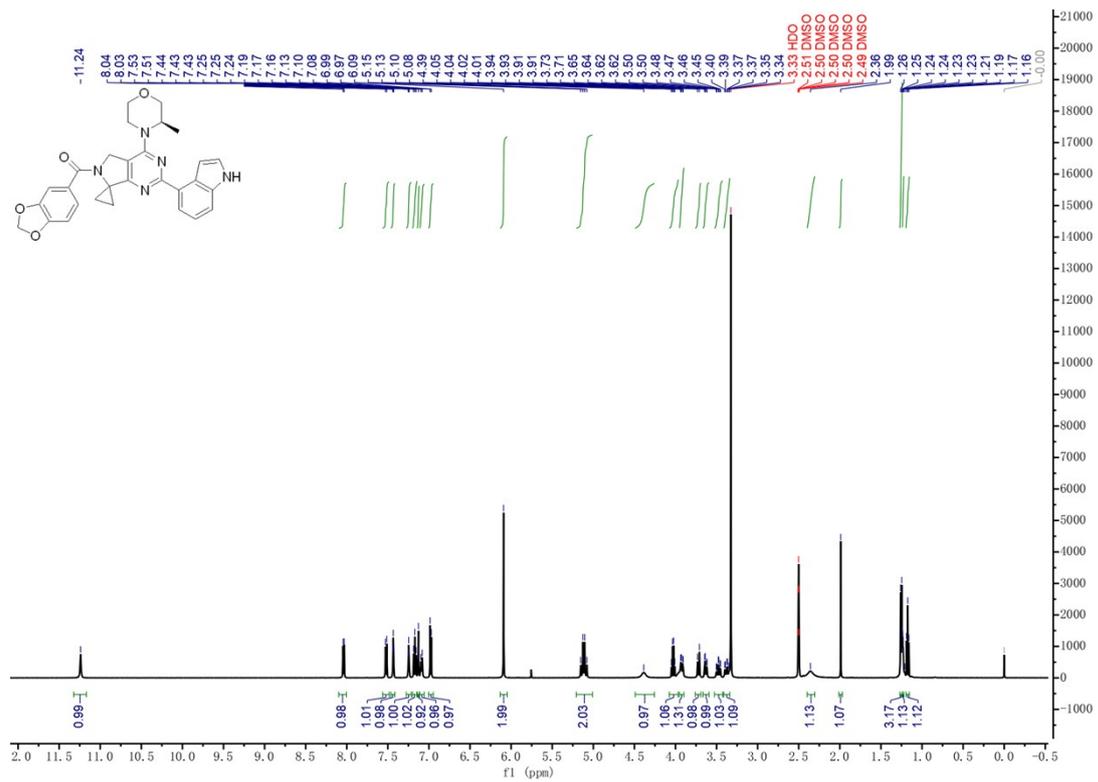
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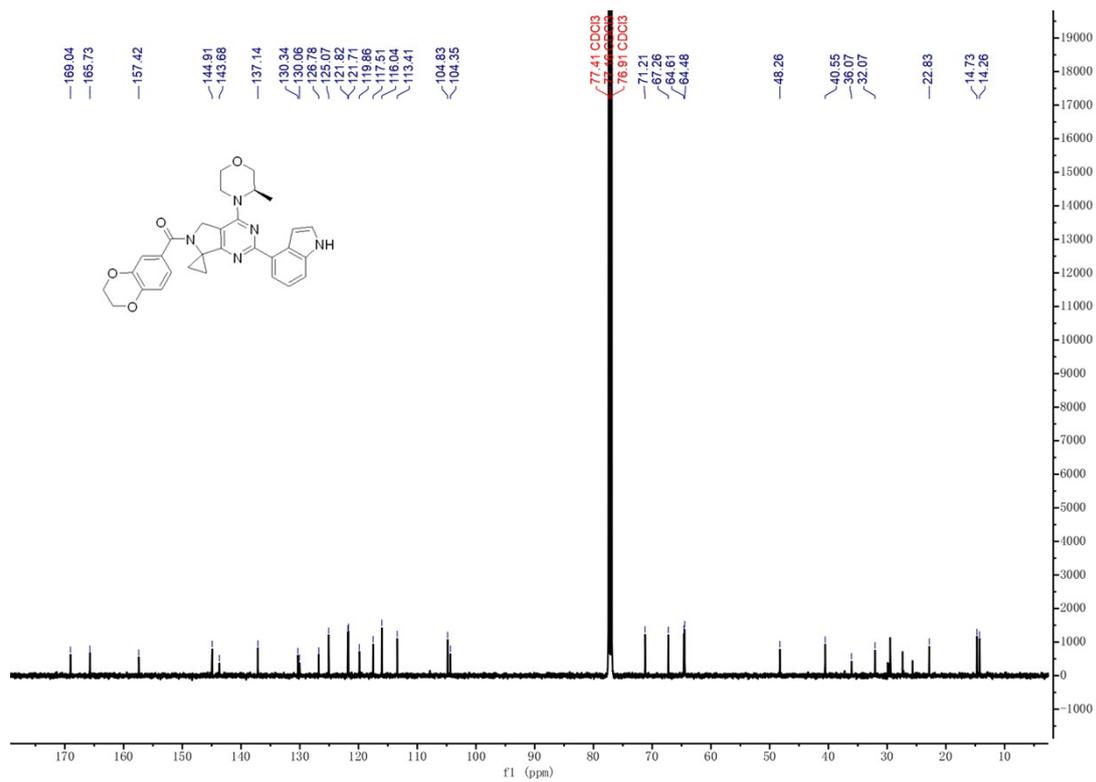
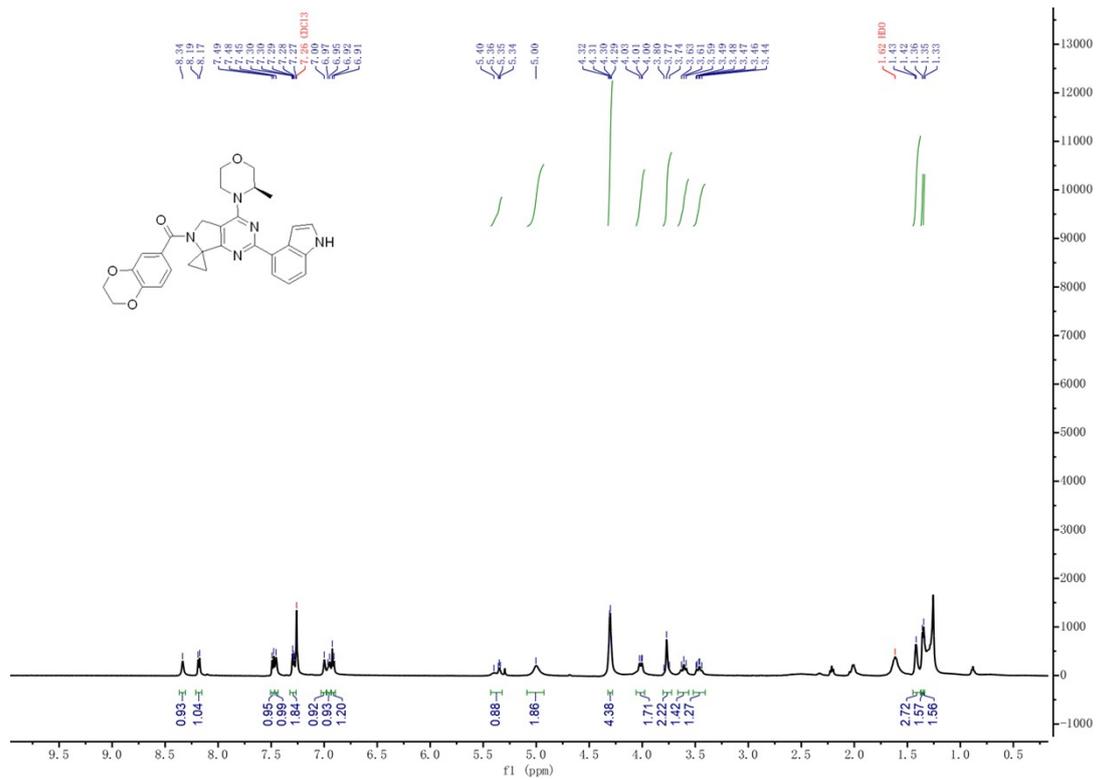
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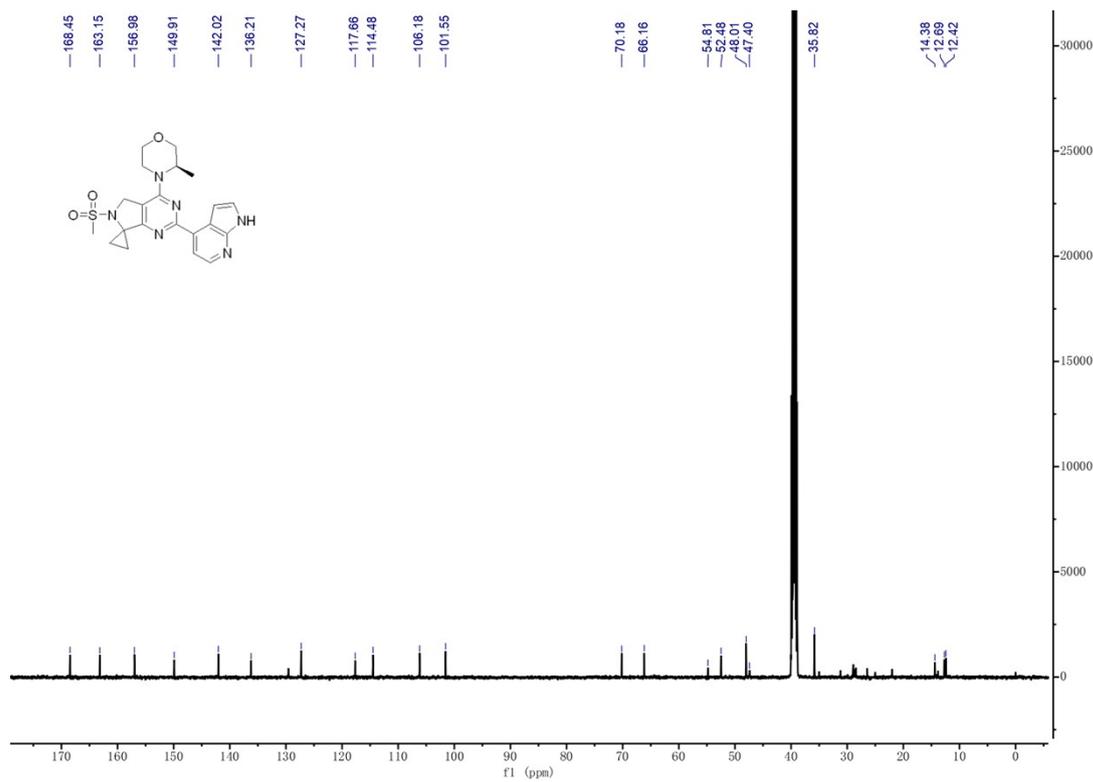
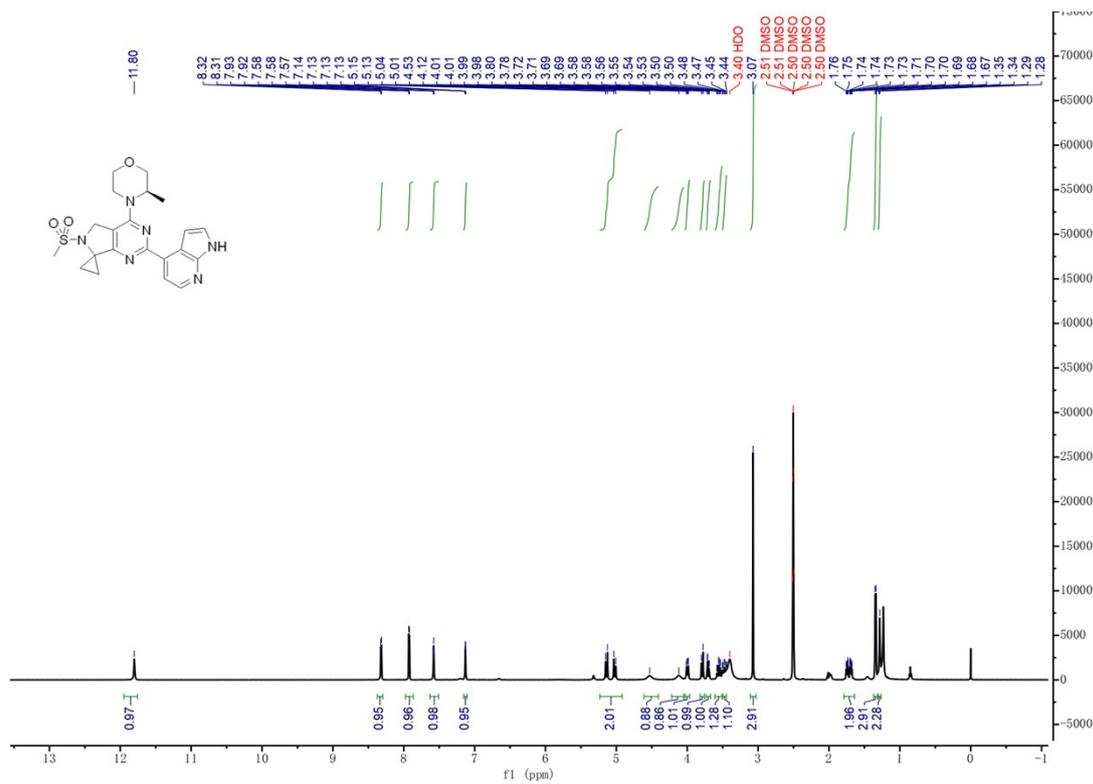
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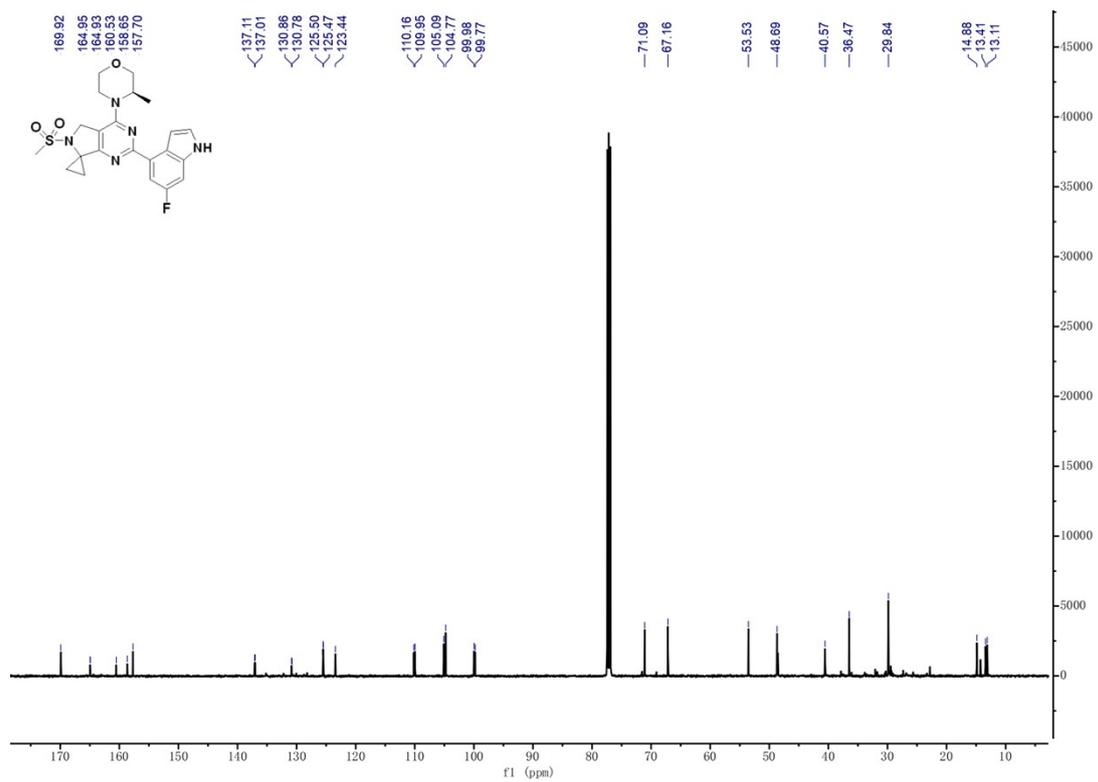
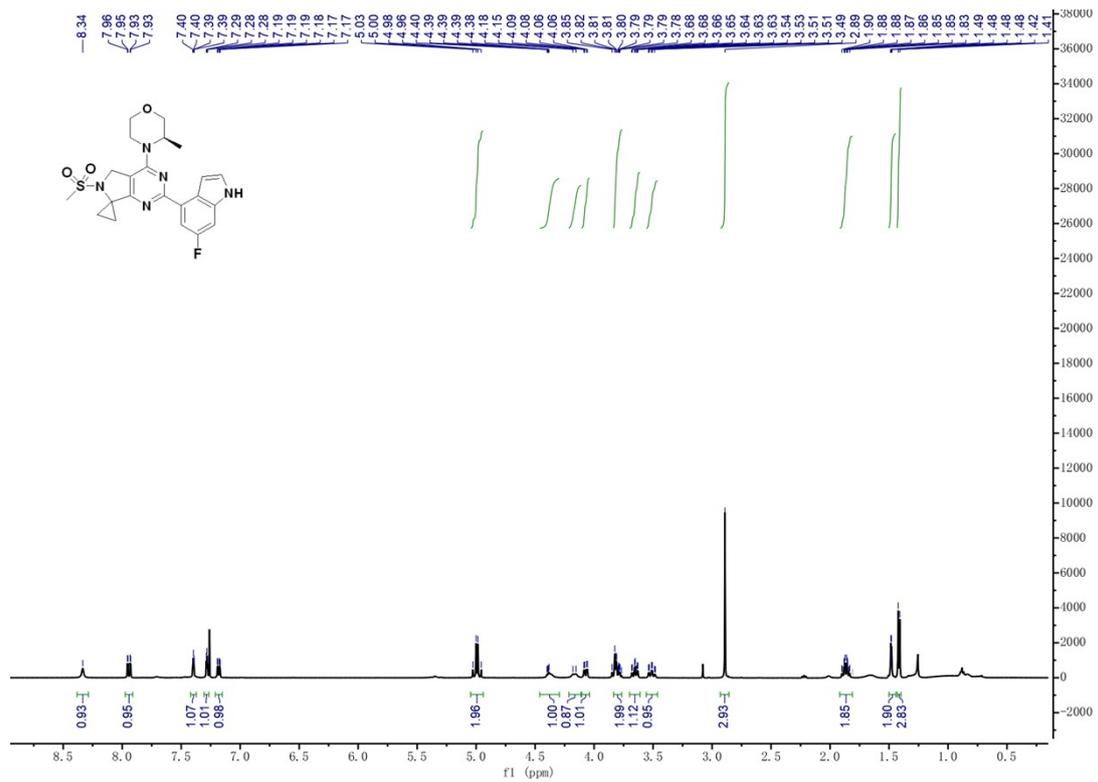
(R)-(2'-(1H-indol-4-yl)-4'-(3-methylmorpholino)spiro[cyclopropane-1,7'-pyrrolo[3,4-d]pyrimidin]-6'(5'H)-yl)(2,3-dihydrobenzo[b][1,4]dioxin-6-yl)methanone



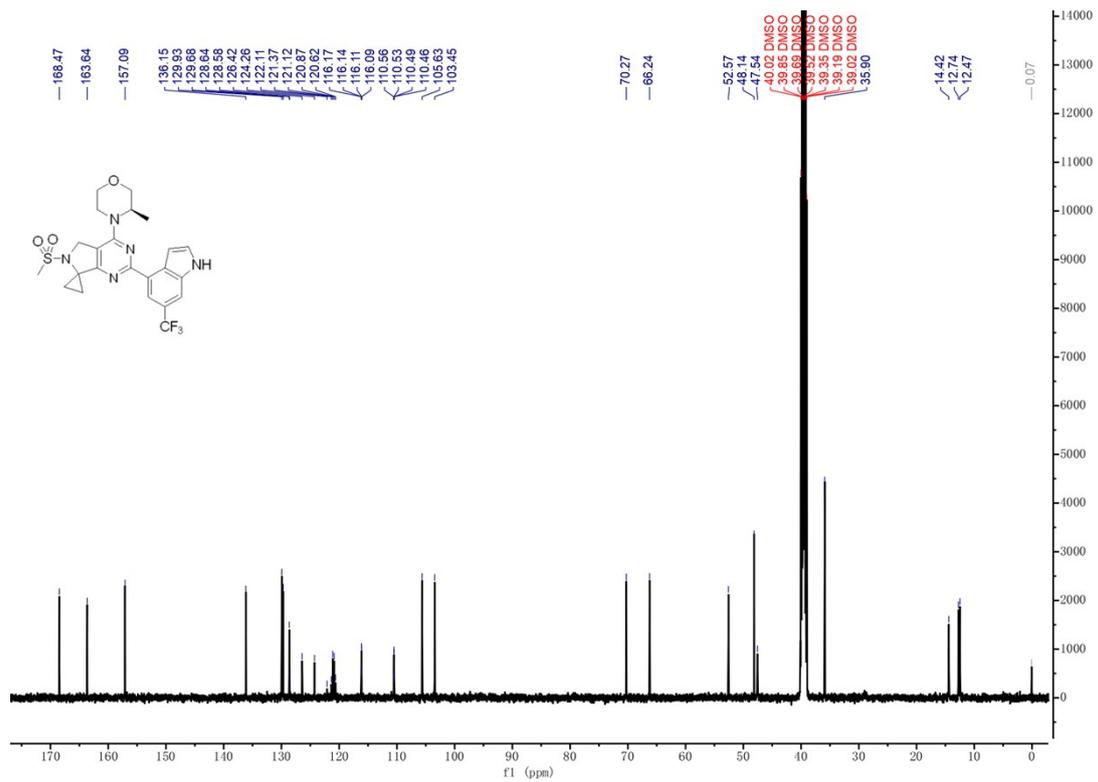
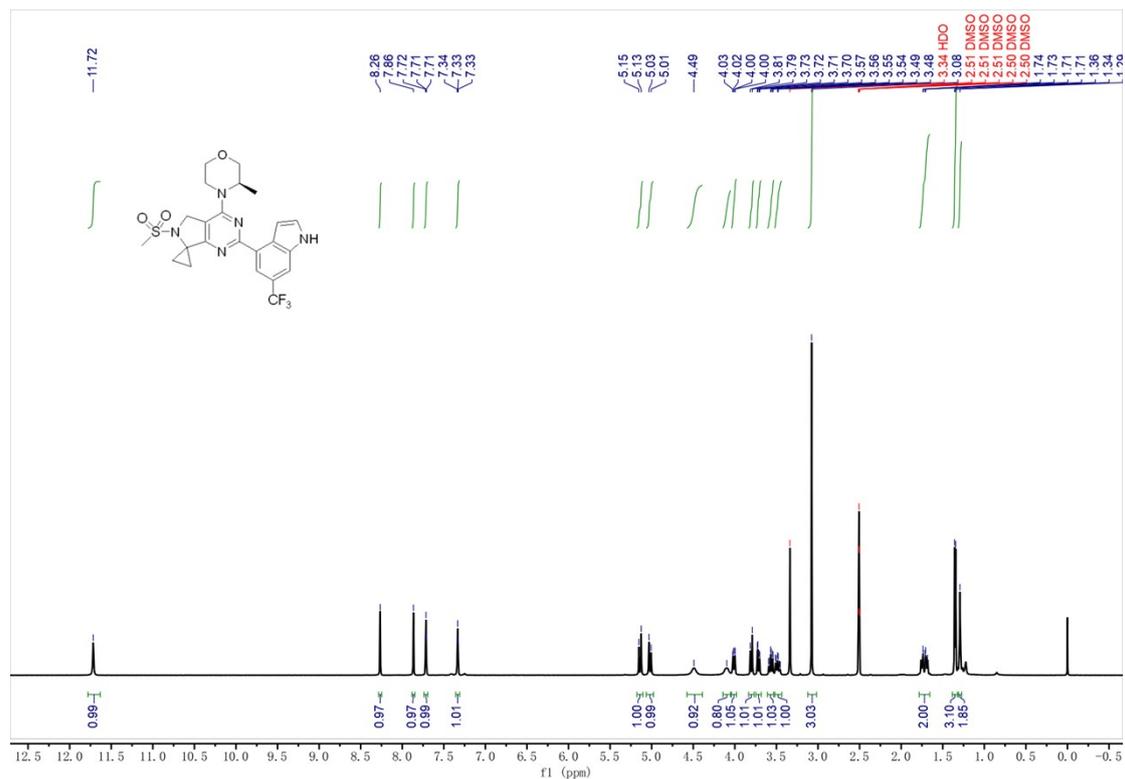
(R)-1-(3-(2'-(1H-indol-4-yl)-4'-(3-methylmorpholino)-5',6'-dihydrospiro[cyclopropane-1,7'-pyrrolo[3,4-d]pyrimidine]-6'-carbonyl)phenyl)ethan-1-one



(R)-4-(2'-(6-fluoro-1H-indol-4-yl)-6'-(methylsulfonyl)-5',6'-dihydrospiro[cyclopropane-1,7'-pyrrolo[3,4-d]pyrimidin]-4'-yl)-3-methylmorpholine



(R)-3-methyl-4-(6'-(methylsulfonyl)-2'-(6-(trifluoromethyl)-1H-indol-4-yl)-5',6'-dihydrospiro[cyclopropane-1,7'-pyrrolo[3,4-d]pyrimidin]-4'-yl)morpholine



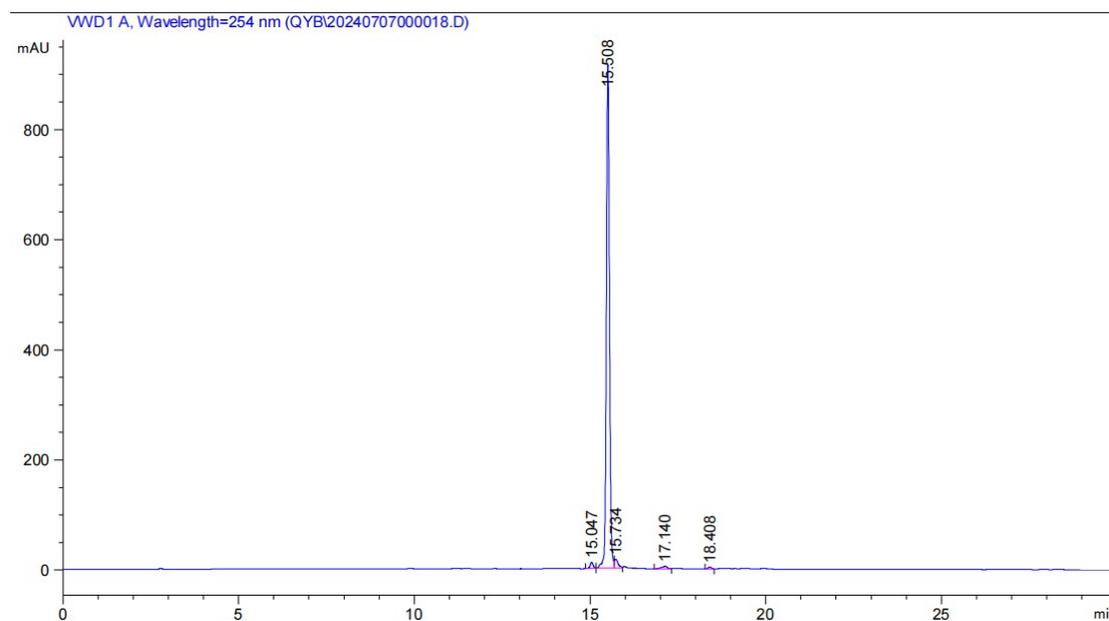
HPLC methods and spectra

System: Agilent 1260 Series

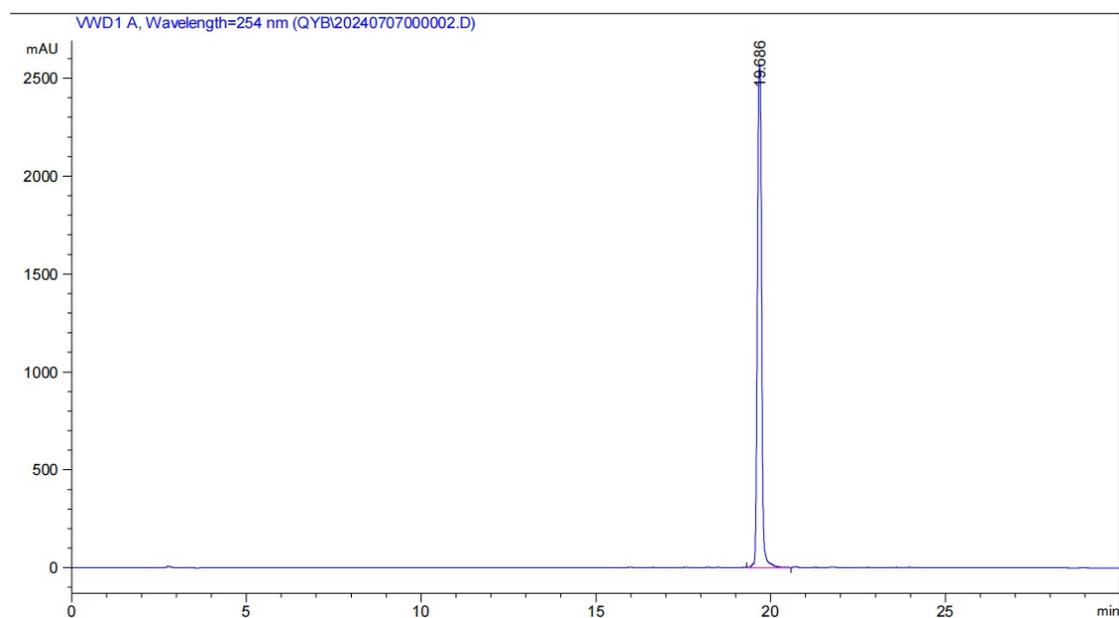
Column: Cosmosil 5C18-AR- II column (4.6 mm × 250 mm)

Flow rate: 1.0 mL/min

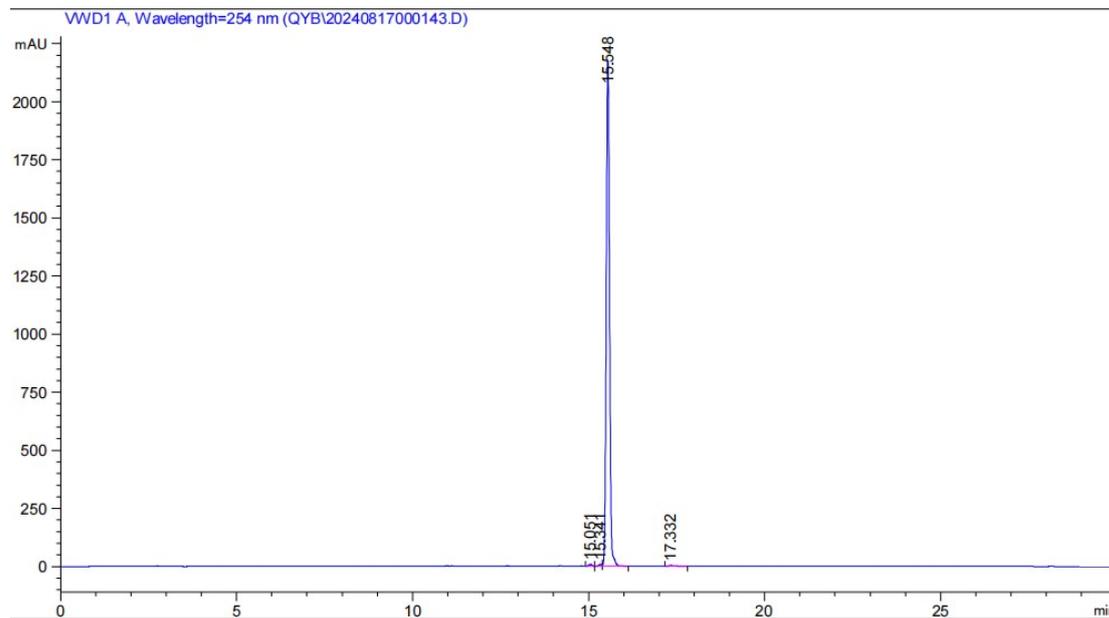
(R)-1-(2'-(1H-indol-4-yl)-4'-(3-methylmorpholino)spiro[cyclopropane-1,7'-pyrrolo[3,4-d]pyrimidin]-6'(5'H)-yl)ethan-1-one



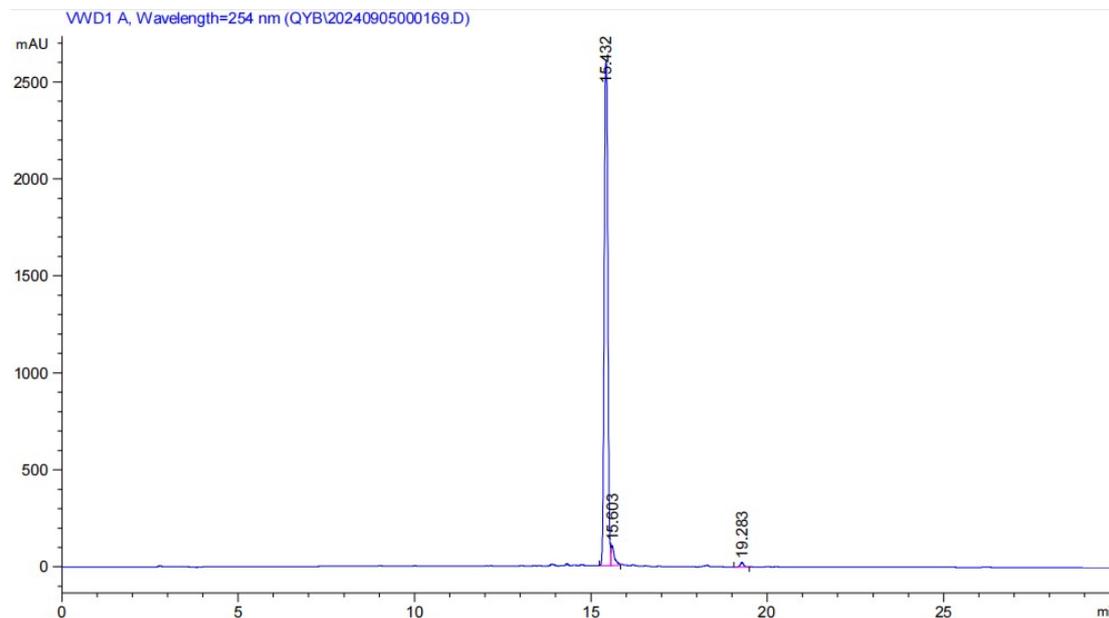
(R)-1-(2'-(1H-indol-4-yl)-4'-(3-methylmorpholino)spiro[cyclopropane-1,7'-pyrrolo[3,4-d]pyrimidin]-6'(5'H)-yl)propan-1-one



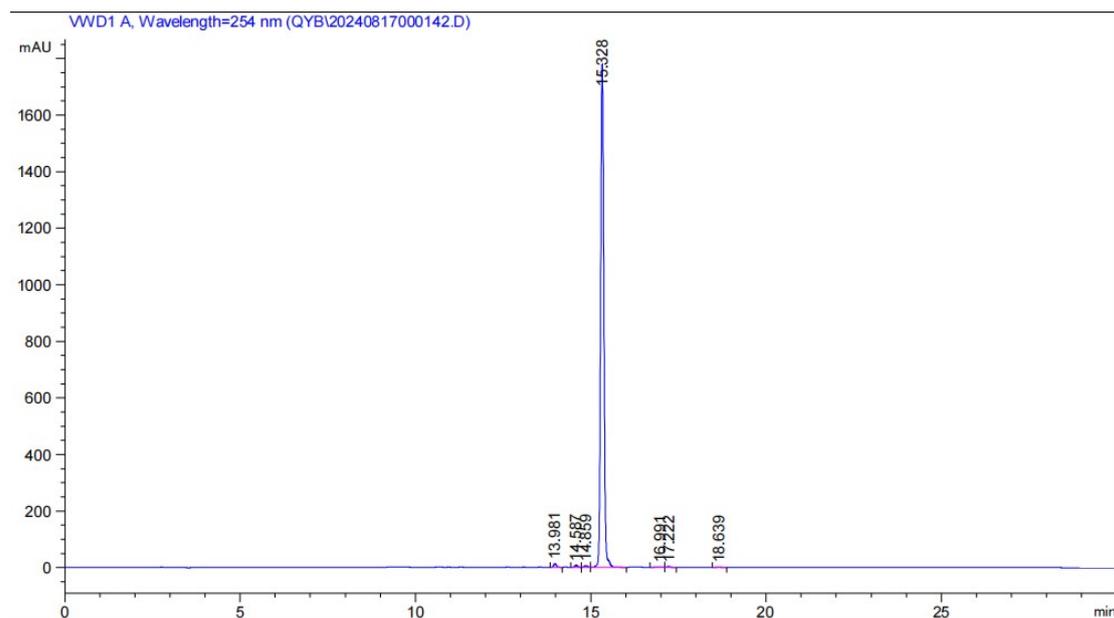
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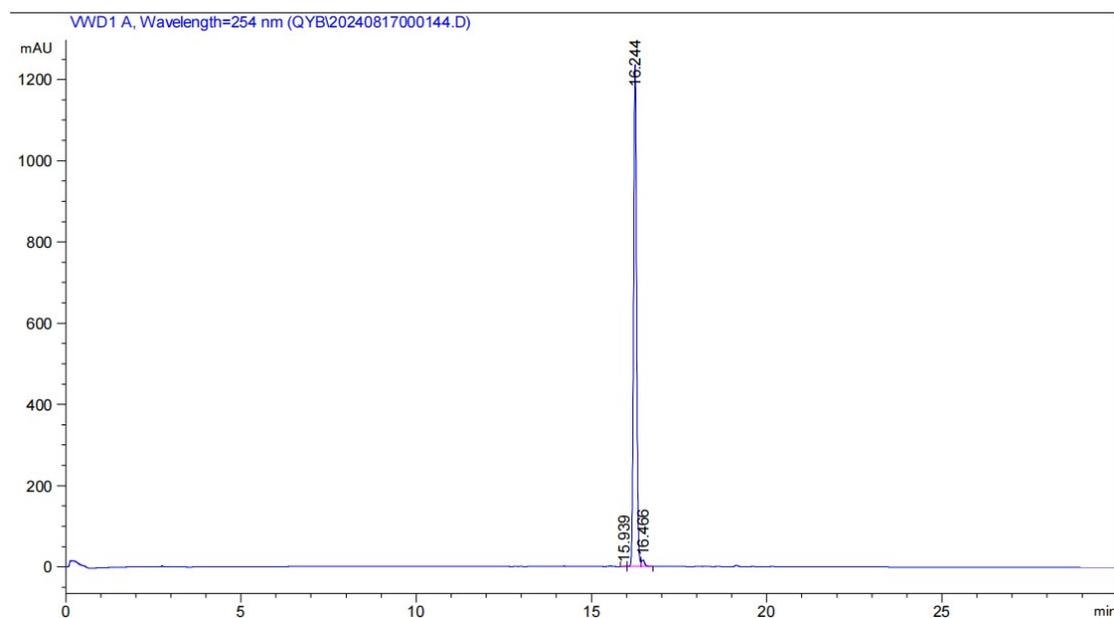
(R)-1-(2'-(1H-indol-4-yl)-4'-(3-methylmorpholino)spiro[cyclopropane-1,7'-pyrrolo[3,4-d]pyrimidin]-6'(5'H)-yl)-2,2-dimethylpropan-1-one



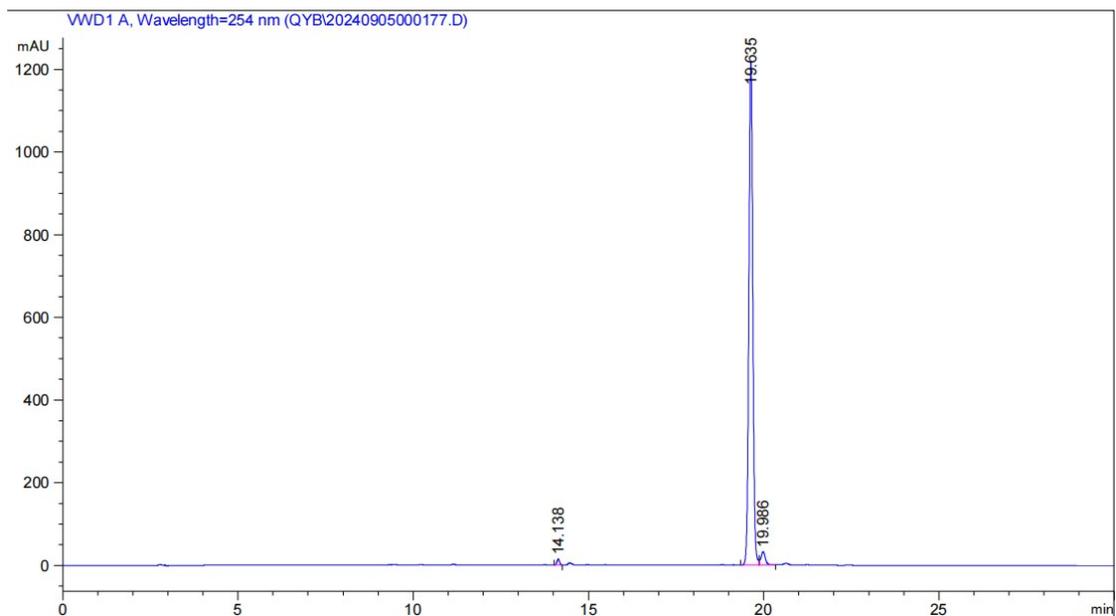
(R)-2'-(1H-indol-4-yl)-4'-(3-methylmorpholino)spiro[cyclopropane-1,7'-pyrrolo[3,4-d]pyrimidin]-6'(5'H)-yl(cyclopropyl)methanone



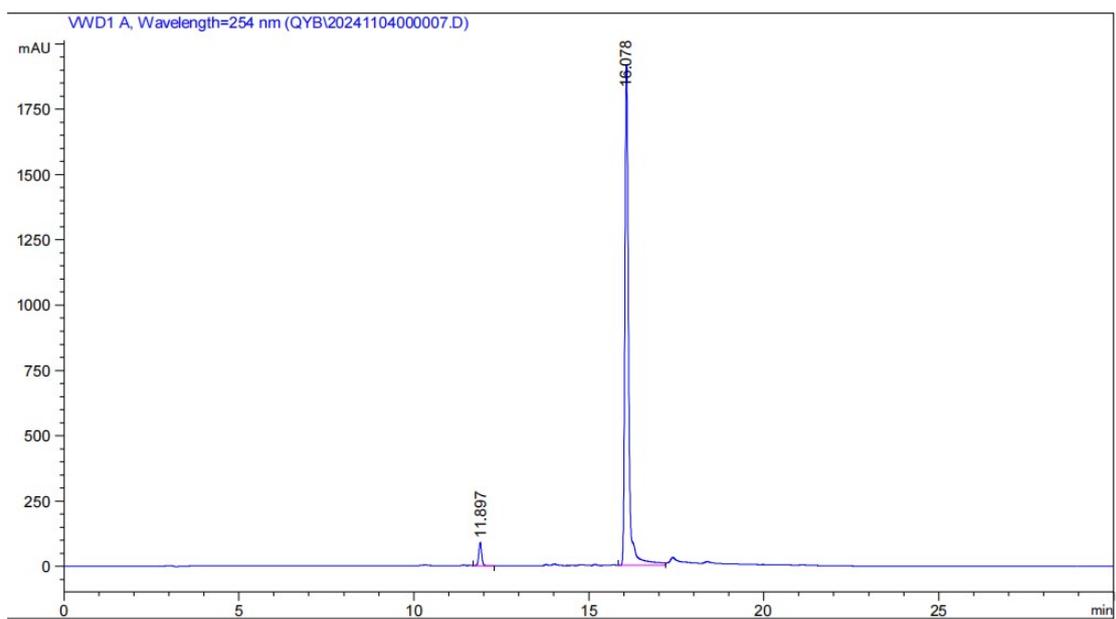
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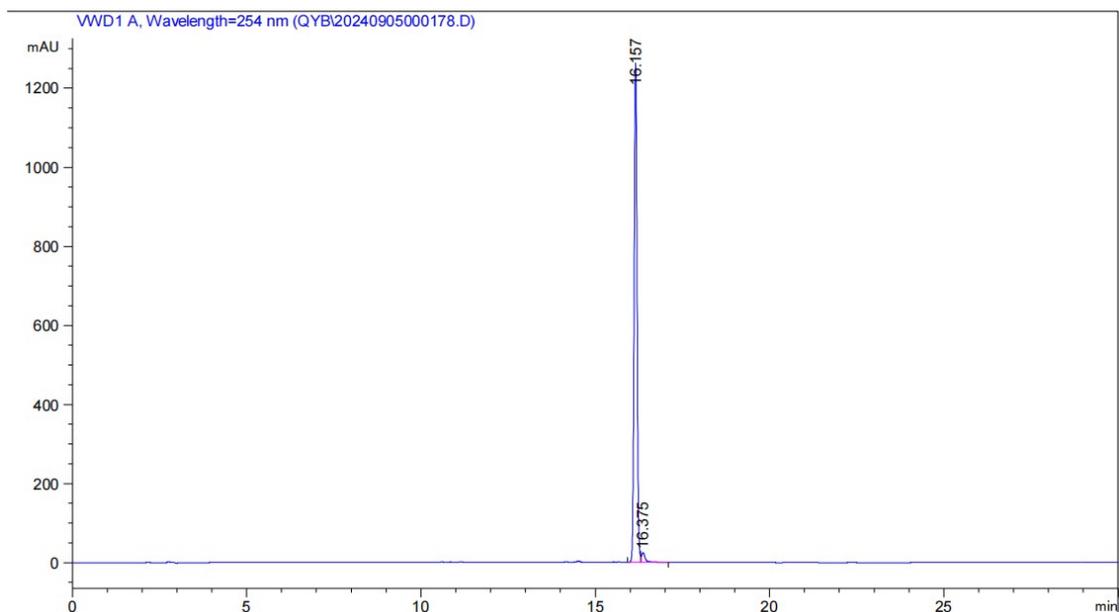
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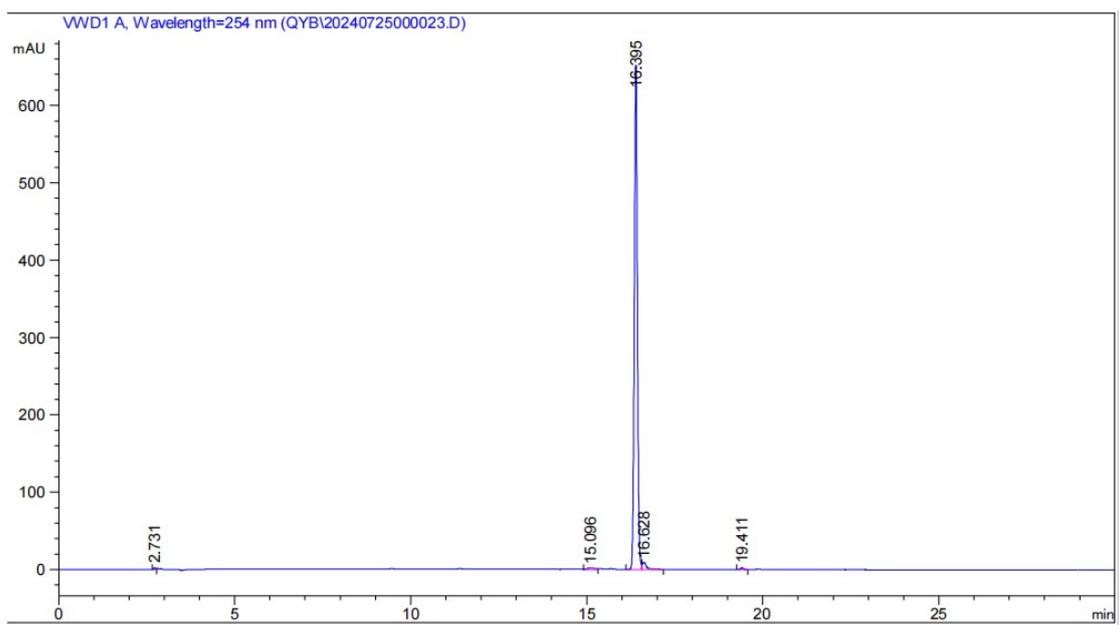
(R)-4-(2'-(1H-indol-4-yl)-6'-(methylsulfonyl)-5',6'-dihydrospiro[cyclopropane-1,7'-pyrrolo[3,4-d]pyrimidin]-4'-yl)-3-methylmorpholine



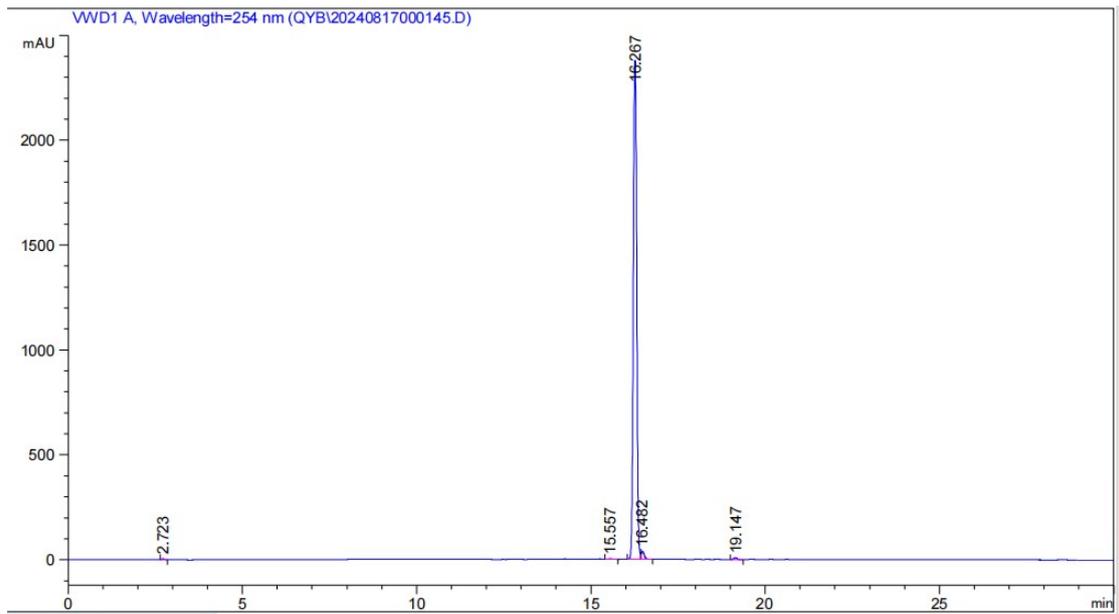
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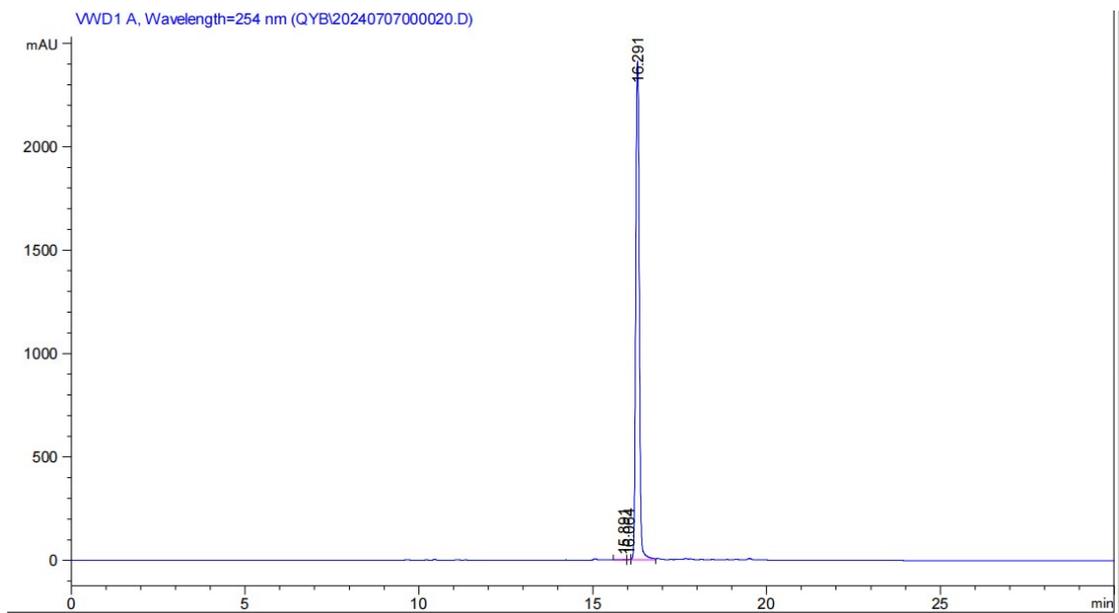
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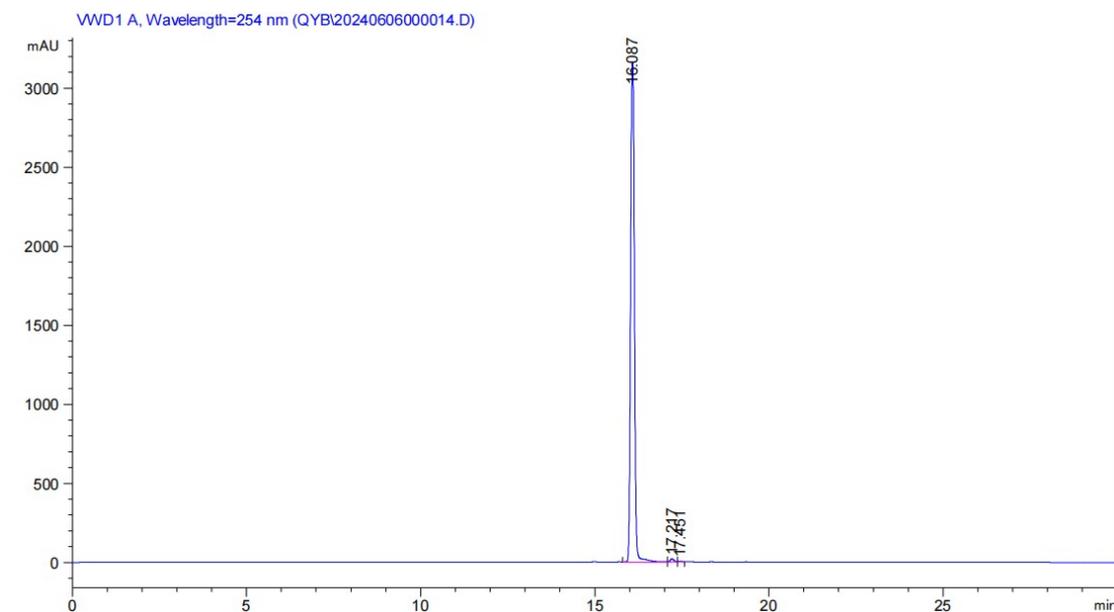
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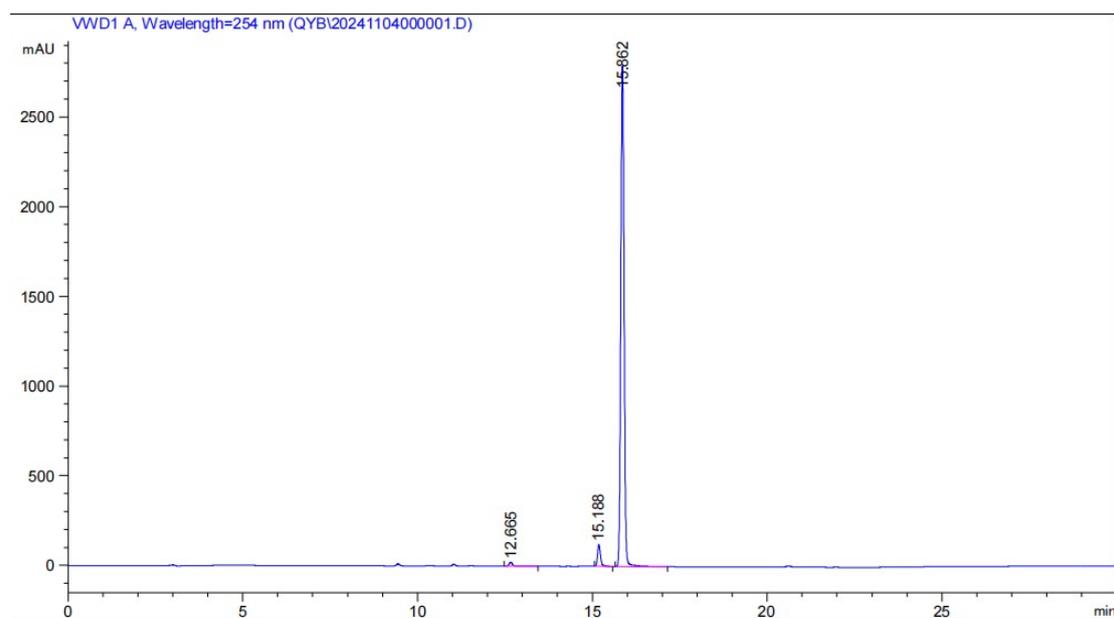
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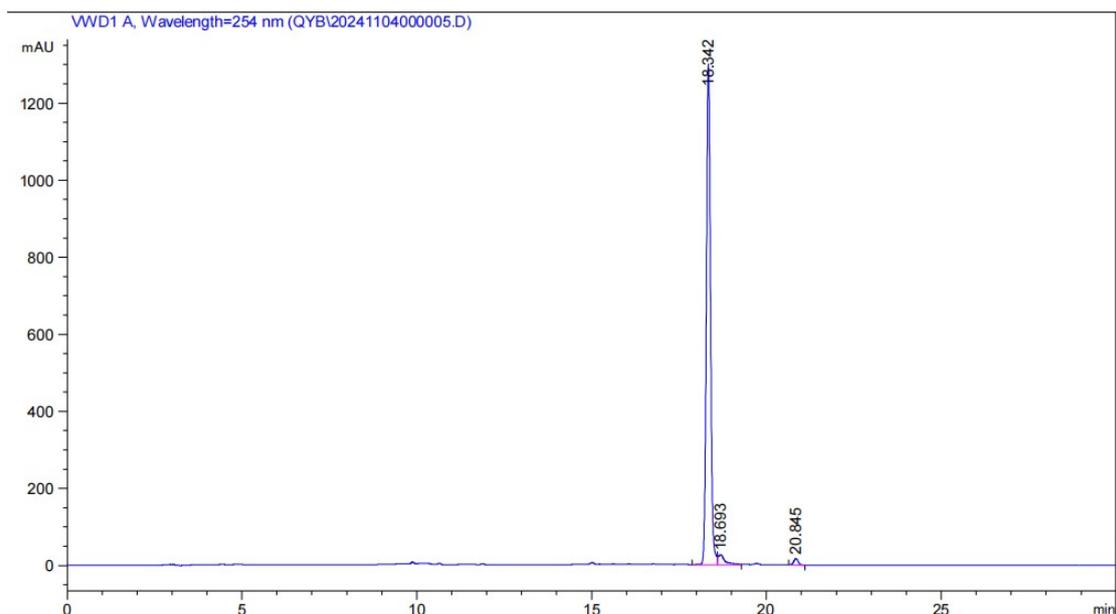
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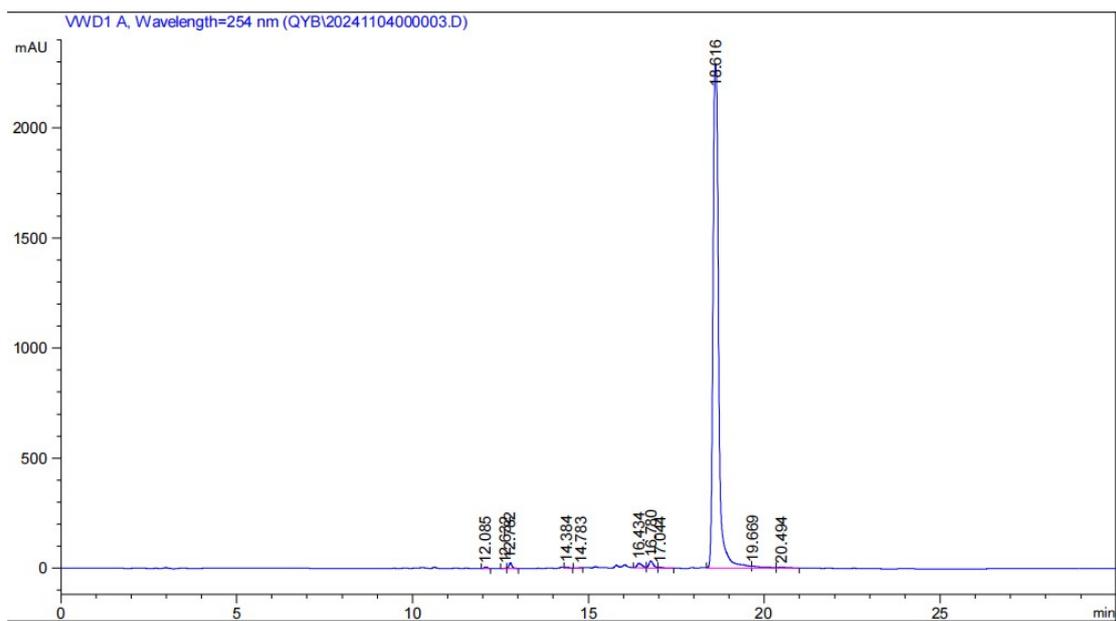
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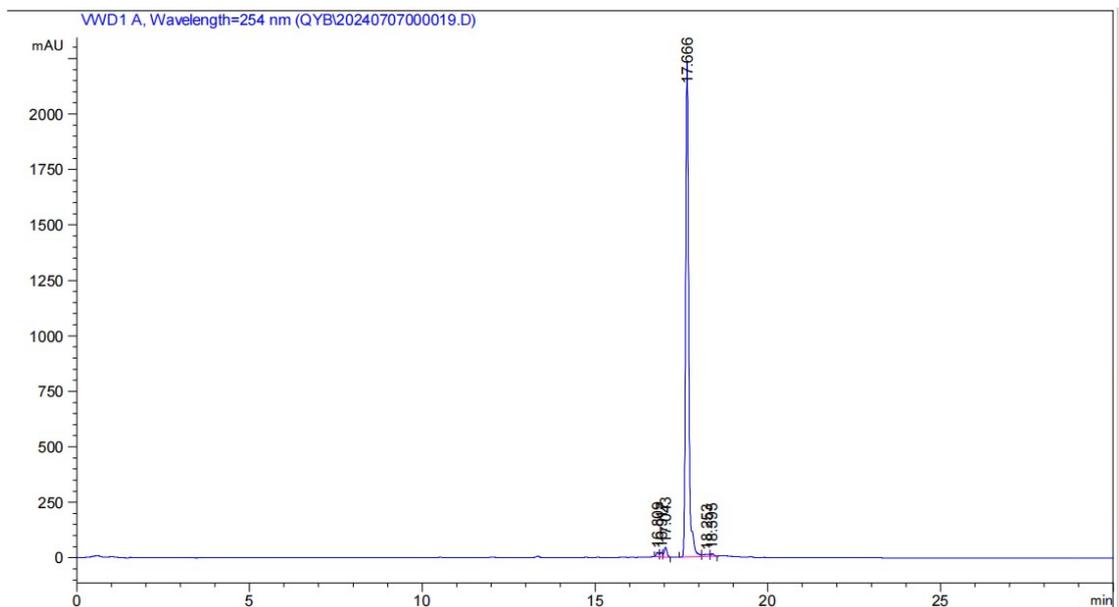
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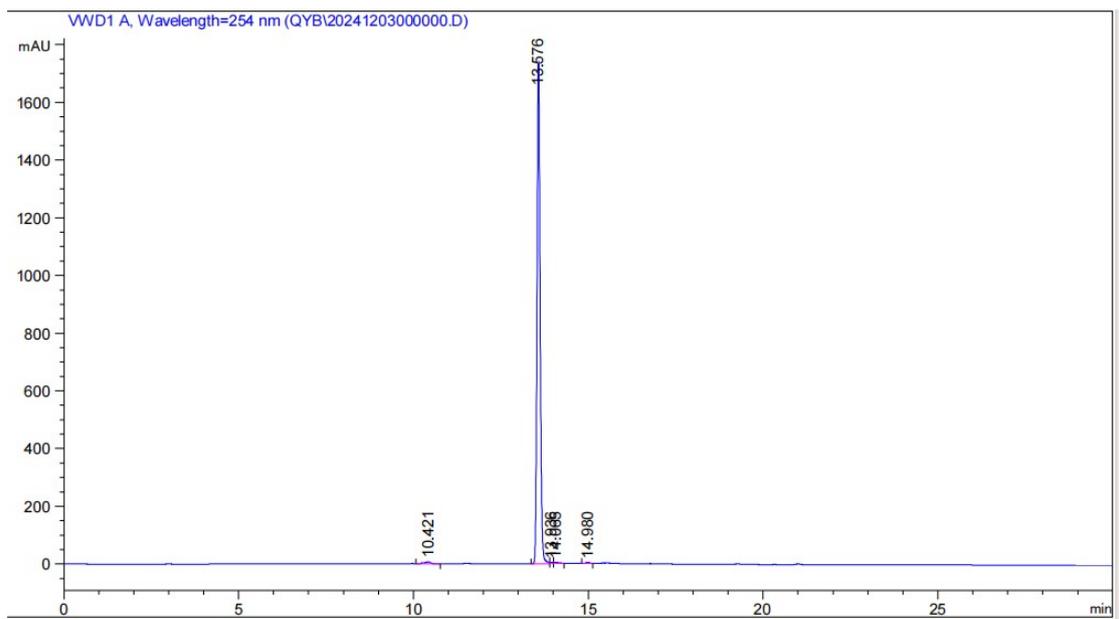
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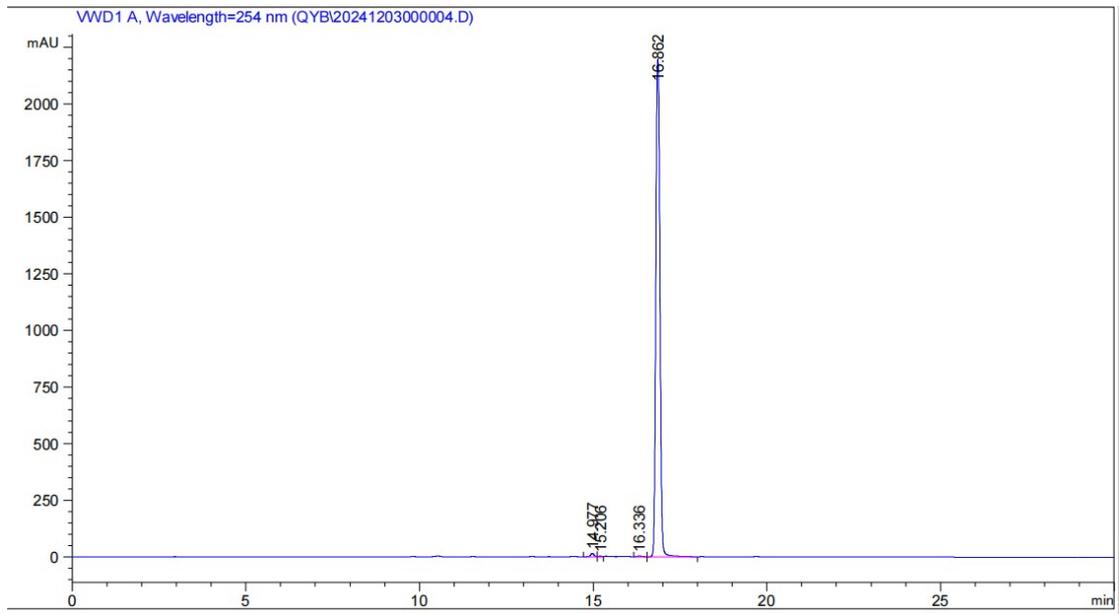
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(R)-3-methyl-4-(6'-(methylsulfonyl)-2'-(1H-pyrrolo[2,3-b]pyridin-4-yl)-5',6'-dihydrospiro[cyclopropane-1,7'-pyrrolo[3,4-d]pyrimidin]-4'-yl)morpholine



(R)-4-(2'-(6-fluoro-1H-indol-4-yl)-6'-(methylsulfonyl)-5',6'-dihydrospiro[cyclopropane-1,7'-pyrrolo[3,4-d]pyrimidin]-4'-yl)-3-methylmorpholine



(R)-3-methyl-4-(6'-(methylsulfonyl)-2'-(6-(trifluoromethyl)-1H-indol-4-yl)-5',6'-dihydrospiro[cyclopropane-1,7'-pyrrolo[3,4-d]pyrimidin]-4'-yl)morpholine

