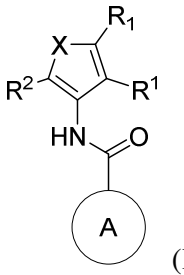
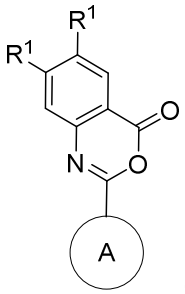
WE CLAIM:

1. A compound of formula (IA) or formula (II):



(IA)



(II),

wherein

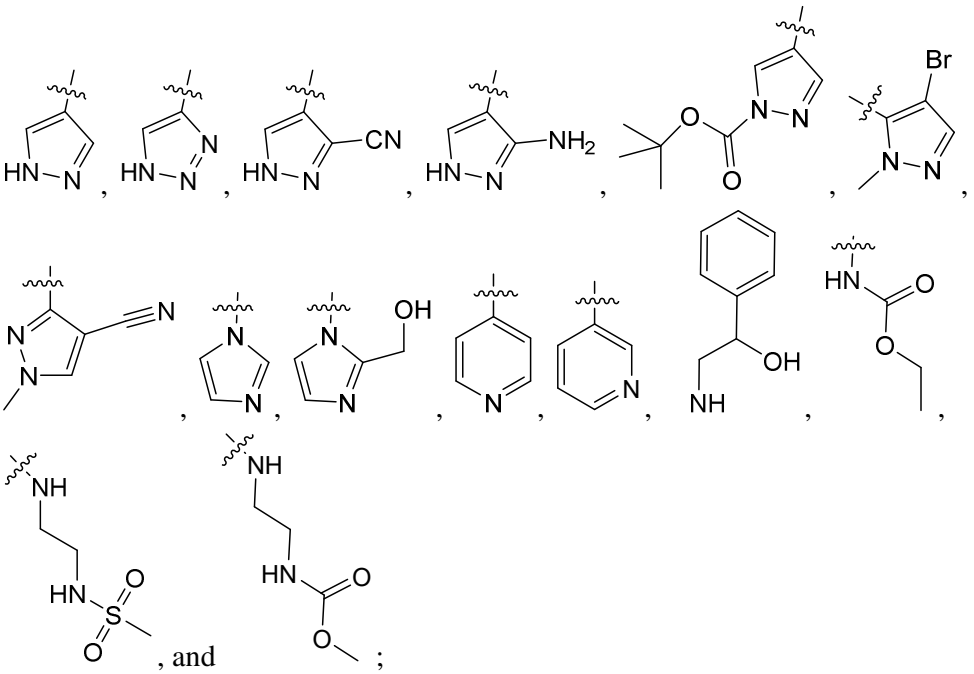
X is S, -N=C(R^1)-, or -C(R^1)=C(R^1)-;

each R^1 is independently H, F, Cl, C_1-C_6-alkyl, ethenyl or ethynyl (either of which can be substituted), cyano, alkoxyl, or haloalkyl;

R^2 is selected from the group consisting of -C(O)OR, -C(O)NH(C_1-C_6-alkyl) (wherein the alkyl is optionally substituted), optionally substituted C_3-C_6-cycloalkenyl, and 3- to 10-membered heterocyclyl;

R is selected from the group consisting of H, alkyl optionally substituted with –((C_1-C_6-alkyl)OC(O)OC_1-C_6-alkyl) or 3- to 10-membered heterocyclyl, and benzyl, wherein the benzyl can be unsubstituted or substituted with methoxyl or with an acid or ester isostere;

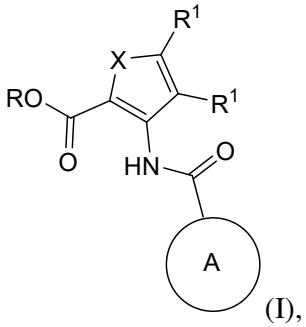
Ring A is a 5- or 6-membered heteroaryl comprising 1, 2, or 3 N atoms, unsubstituted or substituted with 1, 2, or 3 groups independently selected from the group consisting of NH_2, NH-benzyl (wherein the benzyl is unsubstituted or is substituted with methoxyl, cyano, alkylnitrile, haloalkyl, hydroxymethyl, aminomethyl, aminopropyl, carboxamido, or alkoxy),



wherein a wavy line indicates a position of bonding;

or a pharmaceutically acceptable salt thereof.

2. The compound according to claim 1, wherein the compound of formula (IA) is of formula (I):



(I),

wherein

X is S, -N=C(R^1)-, or -C(R^1)=C(R^1)-;

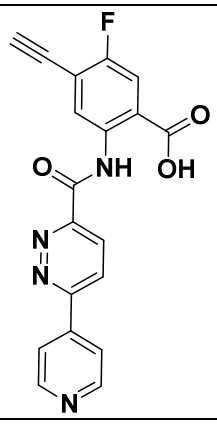
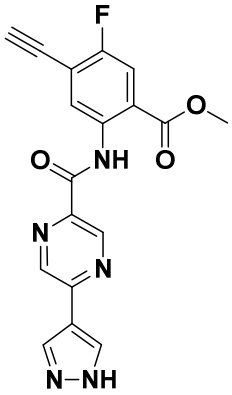
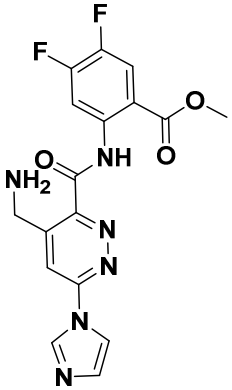
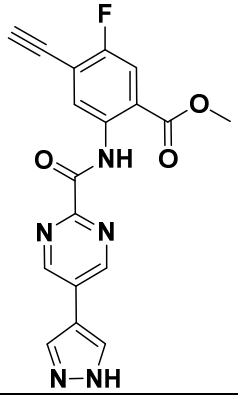
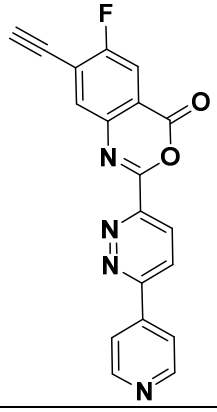
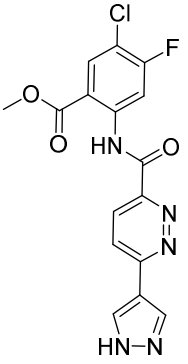
each R^1 is independently H, F, Cl, ethenyl or ethynyl (either of which can be substituted), cyano, alkoxyl, or haloalkyl; and

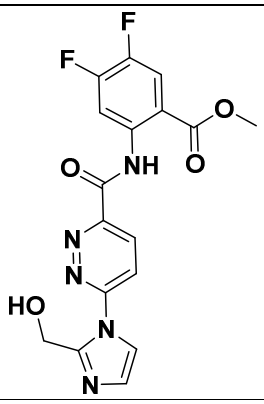
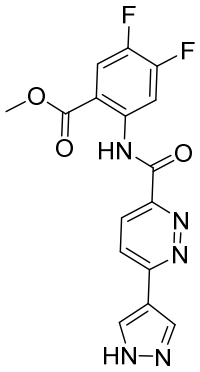
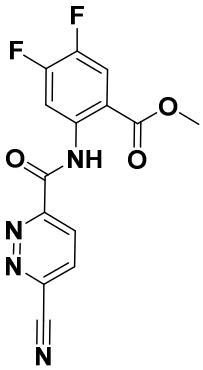
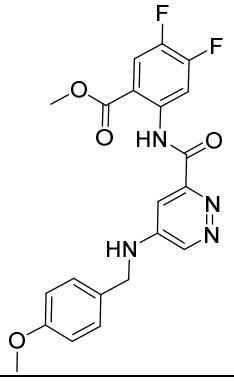
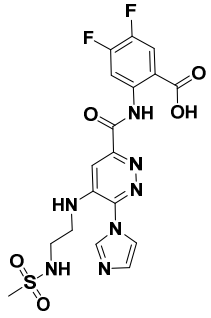
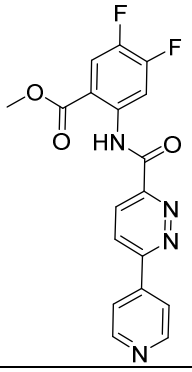
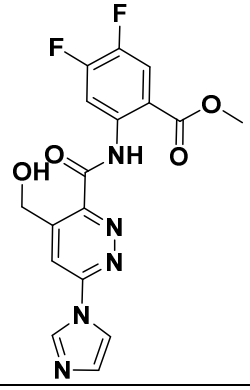
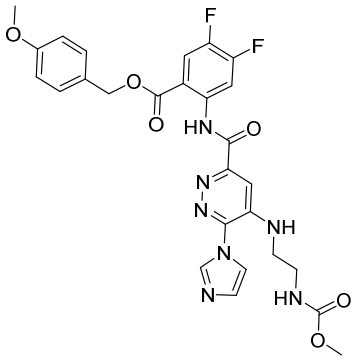
R is H, alkyl, or benzyl, wherein the benzyl can be unsubstituted or substituted with methoxyl or with an acid or ester isostere.

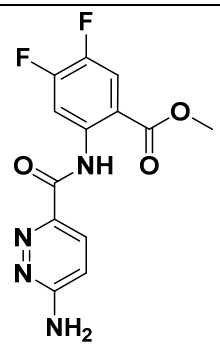
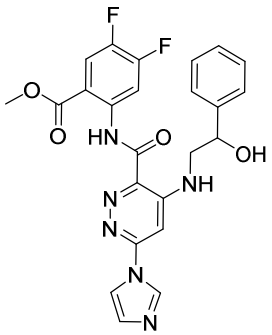
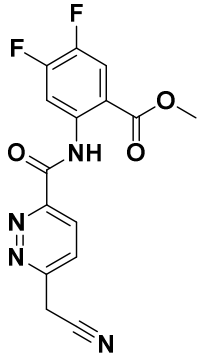
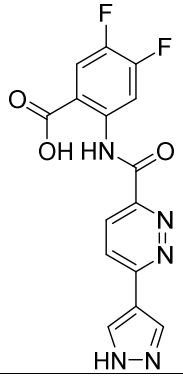
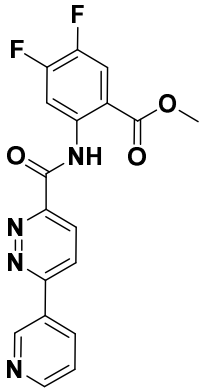
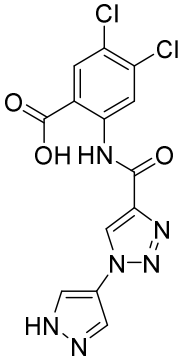
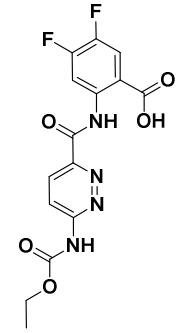
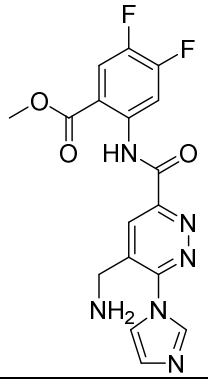
3. The compound according to claim 1, wherein the compound is of formula (II).

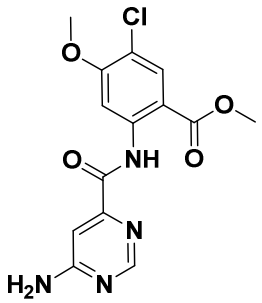
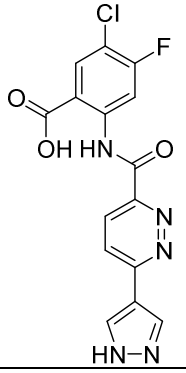
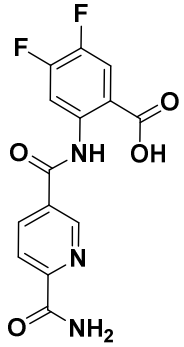
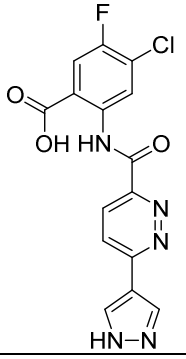
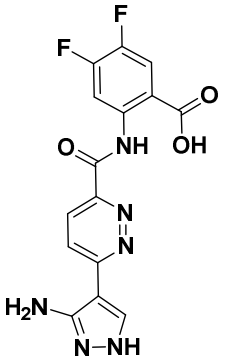
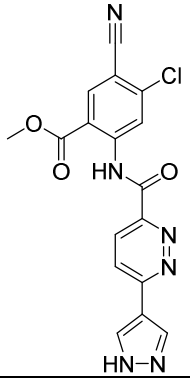
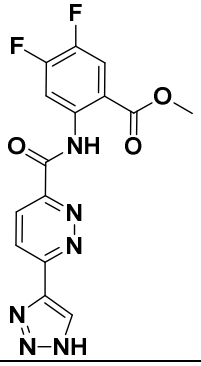
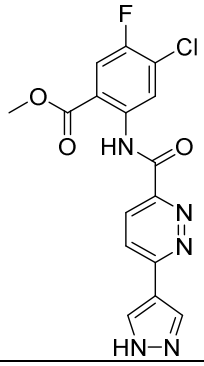
4. The compound according to any one of claims 1 to 3, wherein ring A comprises any one of pyridazinyl, triazolyl, pyrimidinyl, and pyridinyl, any of which can be unsubstituted or substituted.

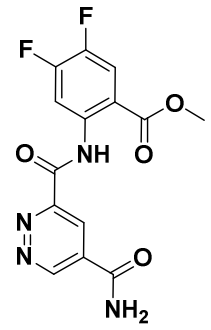
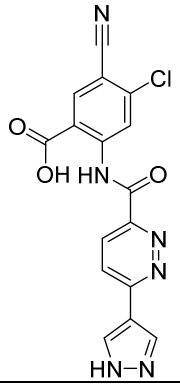
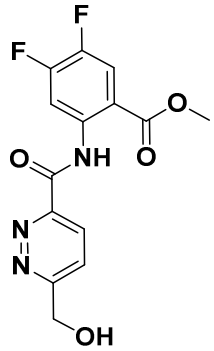
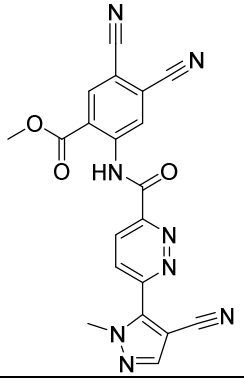
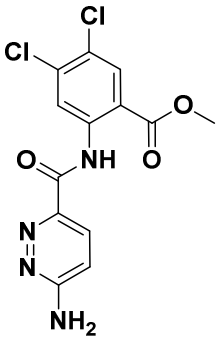
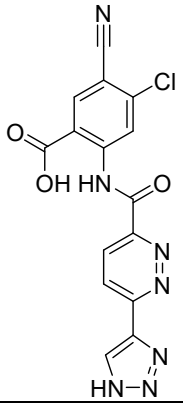
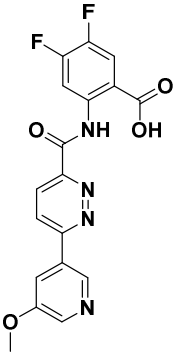
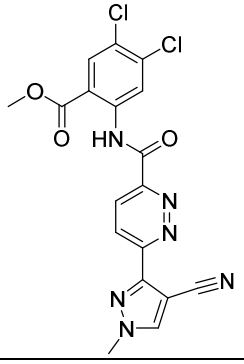
5. The compound according to claim 1, wherein the compound is one selected from the following table:

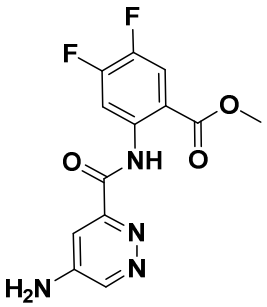
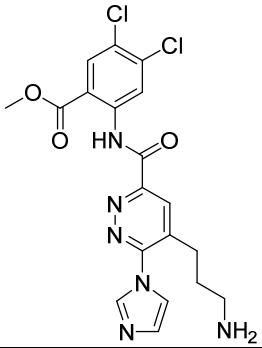
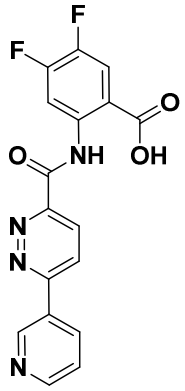
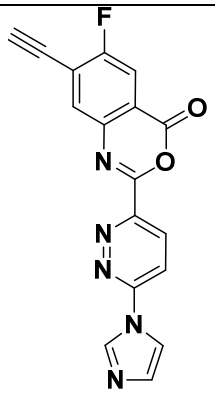
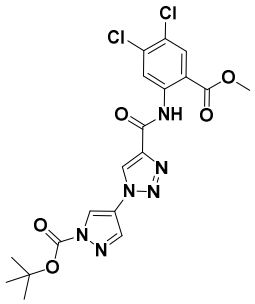
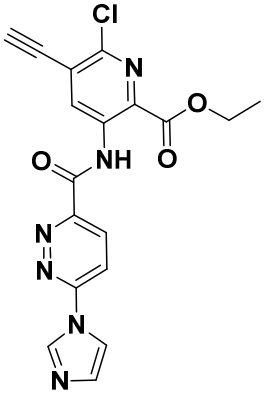
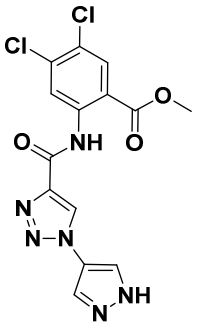
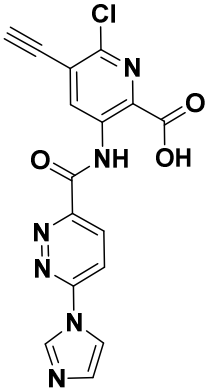
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2		**56**	
3		**57**	

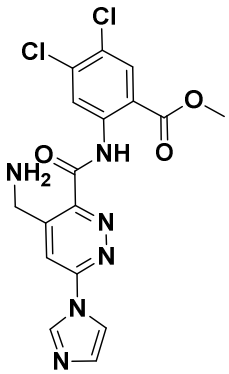
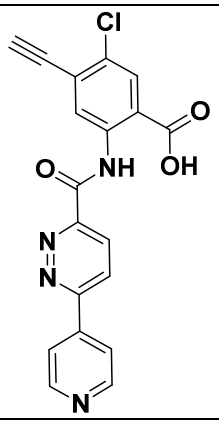
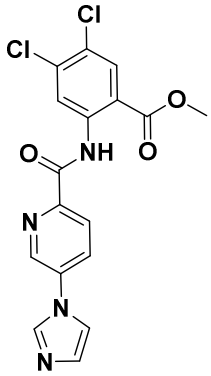
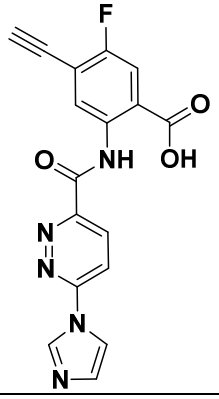
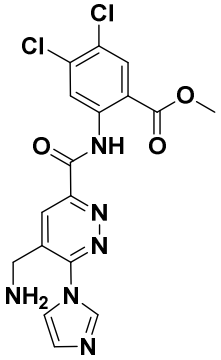
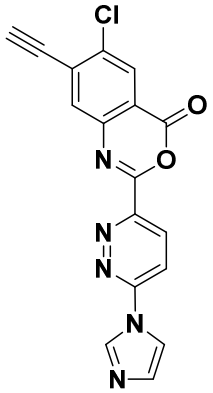
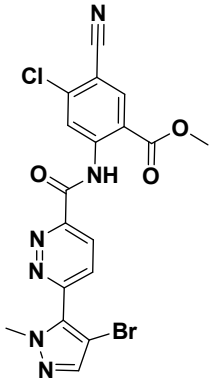
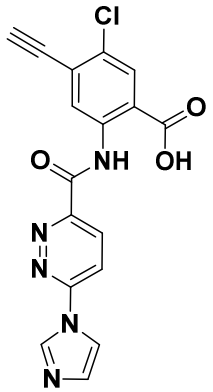
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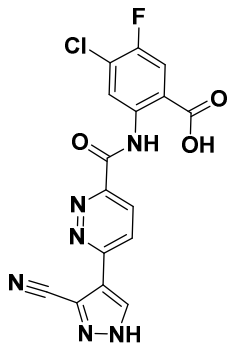
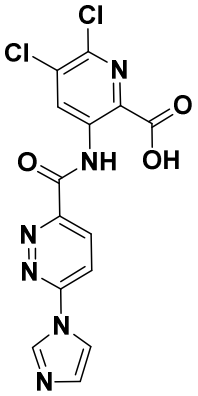
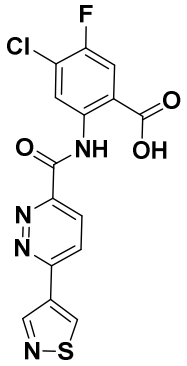
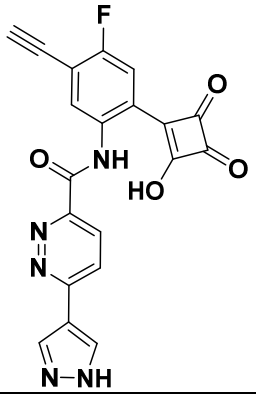
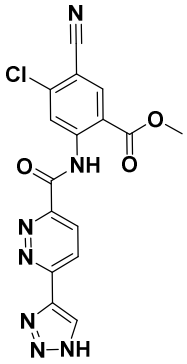
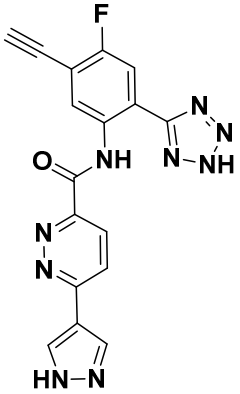
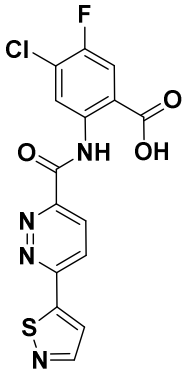
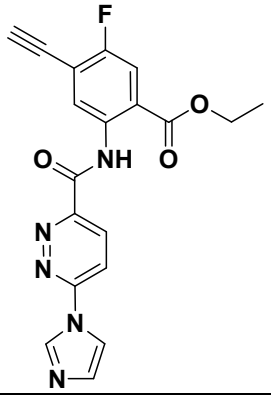
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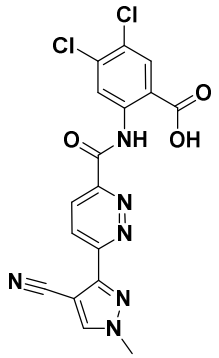
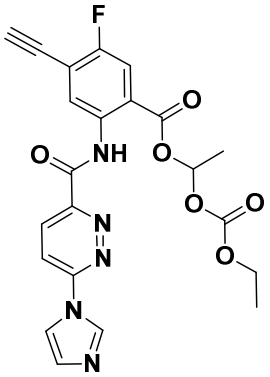
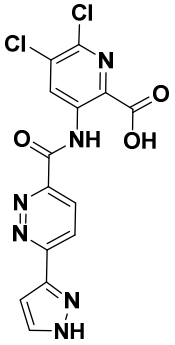
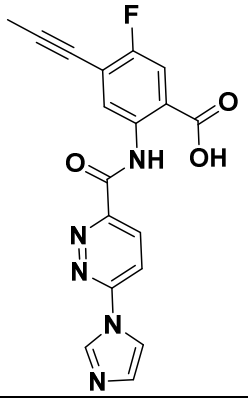
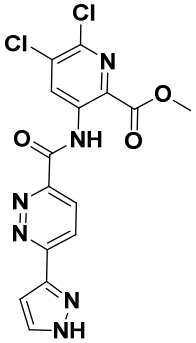
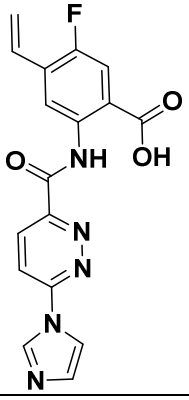
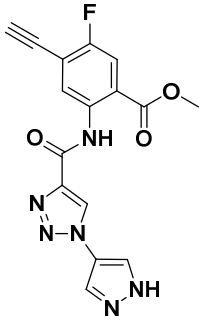
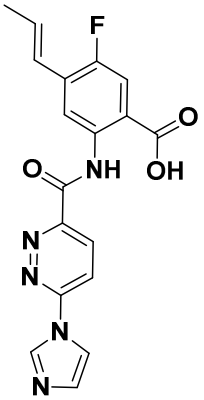
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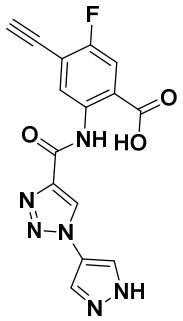
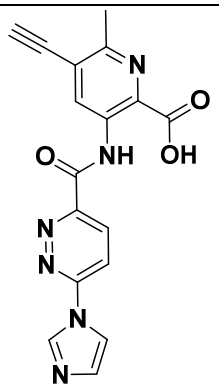
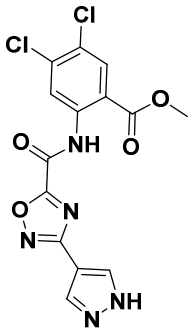
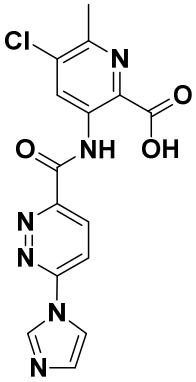
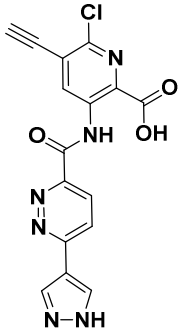
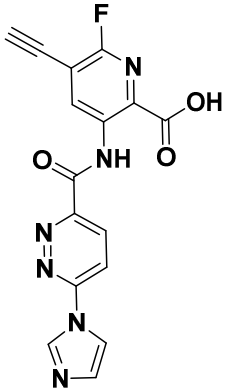
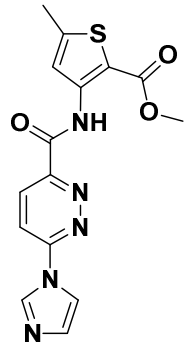
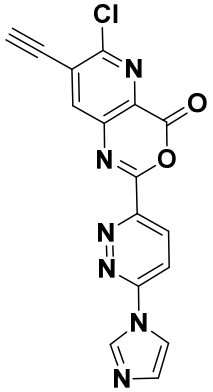
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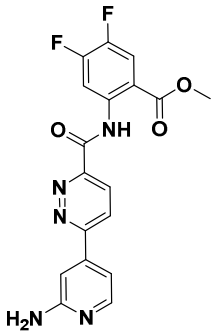
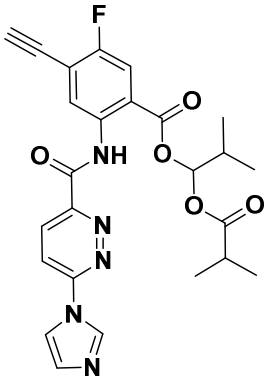
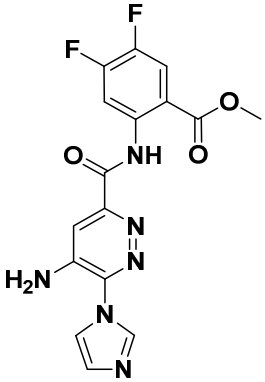
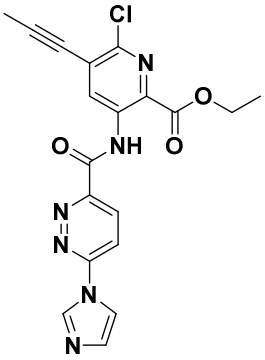
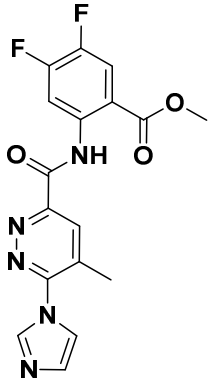
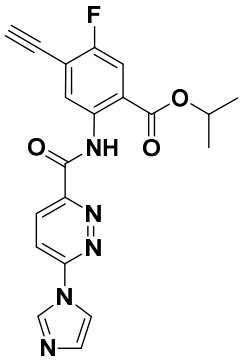
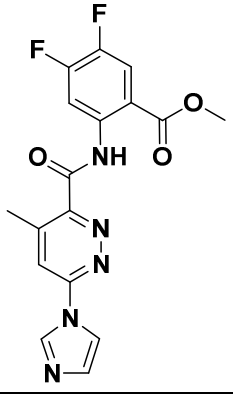
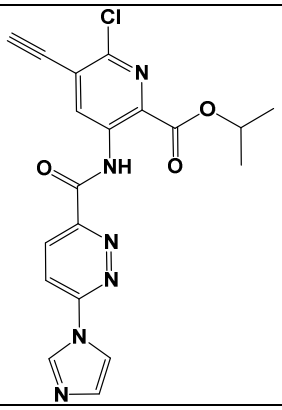
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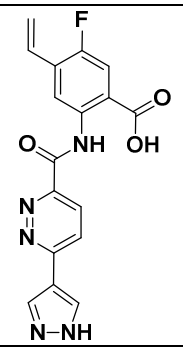
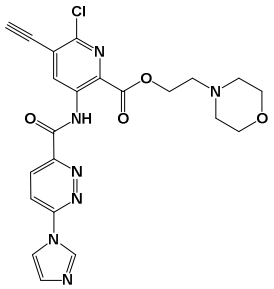
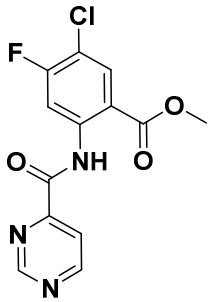
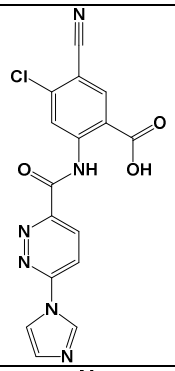
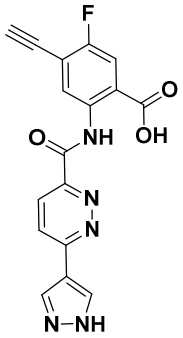
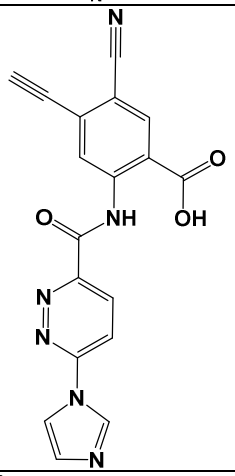
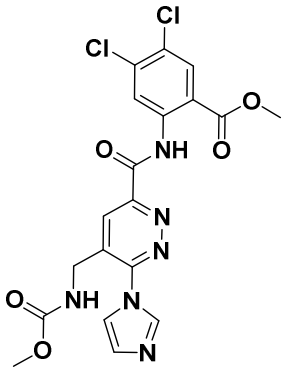
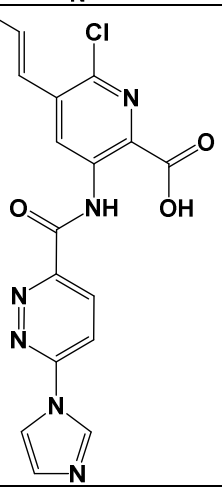
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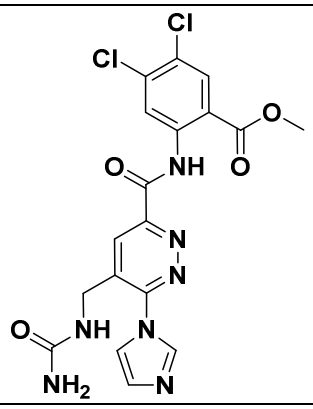
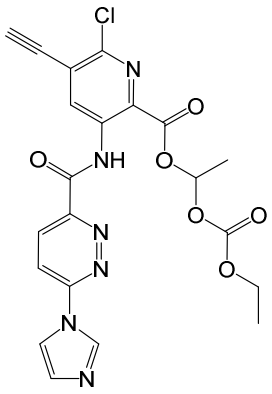
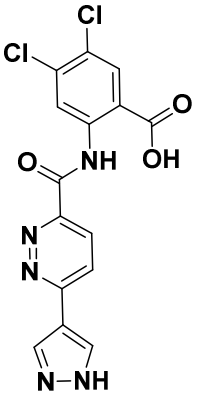
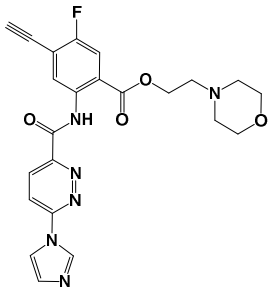
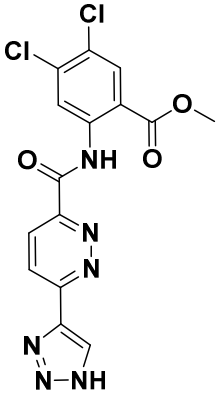
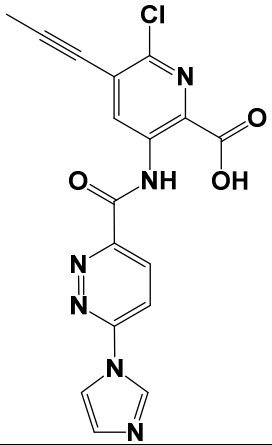
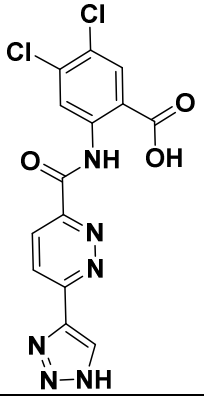
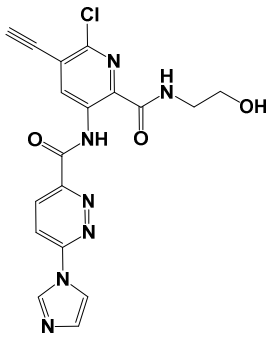
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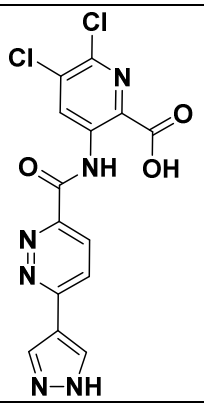
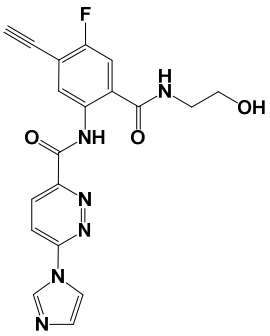
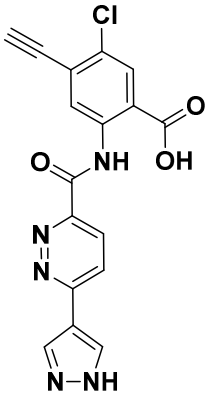
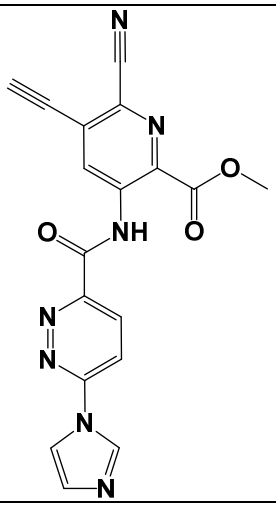
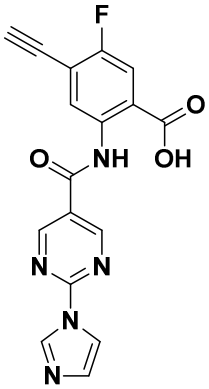
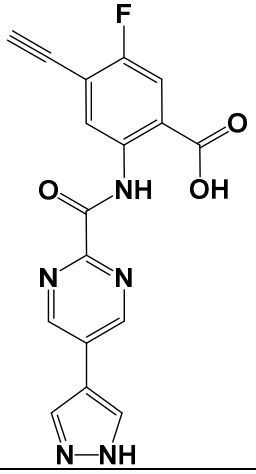
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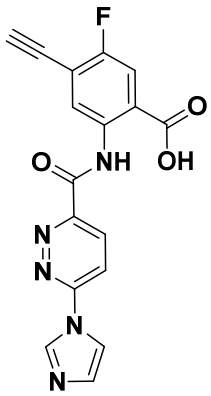
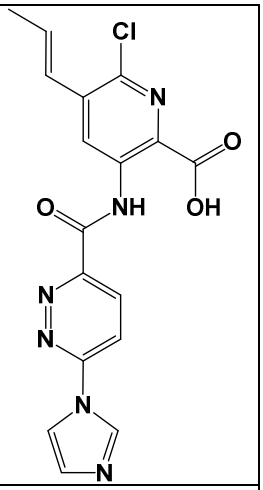
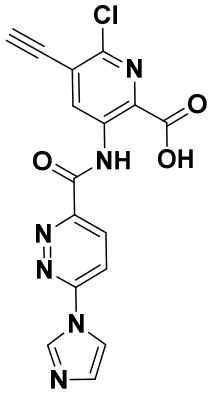
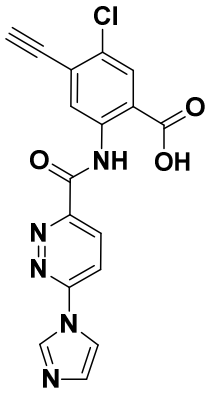
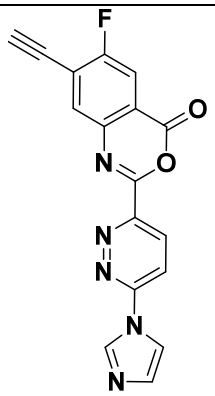
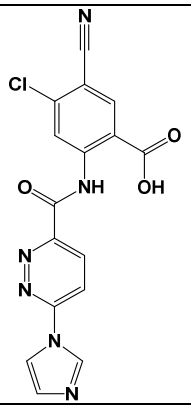
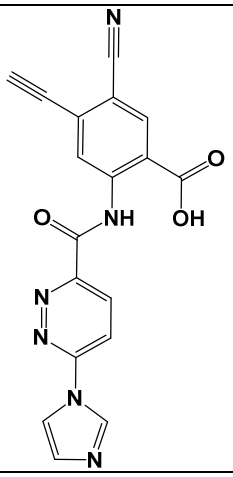
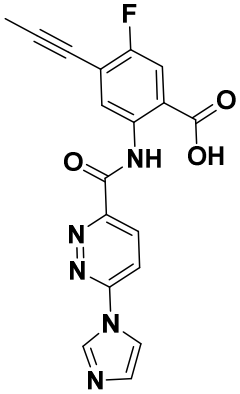
40		**94**	
41		**95**	
42		**96**	
43		**97**	

44		**98**	
45		**99**	
46		**100**	
47		**101**	

48		**102**	
49		**103**	
50		**104**	
51		**105**	

52		**106**	
53		**107**	
54		**108**	

6. The compound according to claim 1, wherein the compound is one selected from the following table:

79		**101**	
77		**81**	
75		**99**	
100		**87**	

7. Use of a compound or pharmaceutically acceptable salt therefore according to any one of claims 1 to 6 in the manufacture of a medicament for stimulating expression of interferon genes in a human patient.

8. Use of a compound or pharmaceutically acceptable salt therefore according to any one of claims 1 to 6 in the manufacture of a medicament for treating a tumor in a patient.

9. The use according to claim 7 or 8, wherein the medicament is to be administered by oral or intratumoral administration, or both.

10. The use according to claim 7 or 8, wherein the medicament is to be administered to the patient as an antibody-drug conjugate or in a liposomal formulation.

11. The use according to claim 7 or 8, wherein the medicament is to be administered in combination therapy with an immune-checkpoint targeting drug.

12. The use according to claim 11, wherein the immune-checkpoint targeting drug comprises an anti-PD-L1 antibody, anti-PD-1 antibody, anti-CTLA-4 antibody, or an anti-4-1BB antibody.

13. The use according to claim 7 or 8, wherein the medicament is to be administered in combination therapy with ionizing radiation or anticancer drugs.

14. A pharmaceutical composition comprising a compound or pharmaceutically acceptable salt thereof according to any one of claims 1 to 6 and a pharmaceutically acceptable carrier.

15. A compound or pharmaceutically acceptable salt thereof according to any one of claims 1 to 6 for use in a method of stimulating expression of interferon genes in a human patient.

16. A compound or pharmaceutically acceptable salt thereof according to any one of claims 1 to 6 for use in therapy.

17. The compound for use according to claim 15 or 16, wherein the compound is to be administered to the patient by oral or intratumoral administration, or both.