

Pyrrolopyrimidine Analogues as MKNK Inhibitors

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Title: Pyrrolopyrimidine Analogues as MKNK Inhibitors

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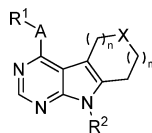
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Assignee Company: Bayer Pharma, Germany

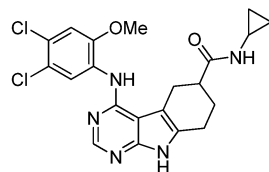
Disease Area: Cancer **Biological Target:** MKNK1

Summary: The present application claims a series of pyrrolopyrimidine analogues, which inhibit MKNK1 and MKNK2 kinases known to phosphorylate eIF4E at Ser209. This phosphorylation step through MKNK protein activity can promote cellular proliferation and survival for malignant transformation. Compounds claimed in this patent could potentially be selective MKNK inhibitor and be useful for the development of new cancer therapies.

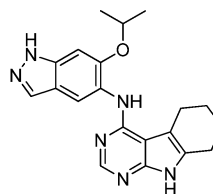
Important Compound Classes:



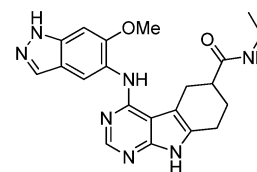
Key Structures:



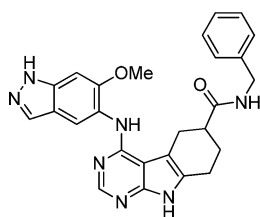
Compound 20



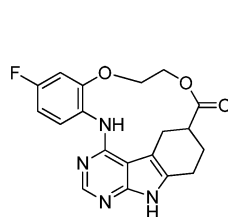
Compound 126



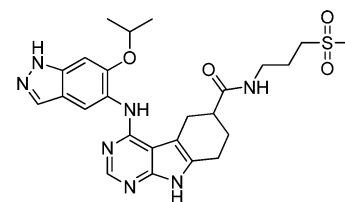
Compound 218



Compound 219



Compound 229



Compound 230

Recent Review Articles:

Hou, J.; Lam, F.; Proud, C.; Wang, S. *Oncotarget* **2012**, *2*, 118–131.

Biological Assay:

Compound inhibitory activity was evaluated using TR-FRET-based MKNK1 high ATP assay

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Pharmacological Data:

	MKNK1 TR-FRET binding (IC ₅₀ , nM)
Compound 20	6
Compound 126	5
Compound 218	6
Compound 219	1
Compound 229	3540
Compound 230	1

Synthesis: 238 compounds were synthesized

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Notes

The authors declare no competing financial interest.