

# Non-clinical development of new selective allosteric TrkA inhibitor for pain treatment

Mother's Pharmaceutical Co., Ltd.



NEUROLOGY	Preclinical
Product Type	Small molecules
Indication	Osteoarthritis
Target	TrkA
MoA(Mechanism of Action)	Allosteric TrkA inhibitor
Competitiveness	<ul style="list-style-type: none"> <li>• A novel allosteric TrkA inhibitor with high selectivity for TrkA among the Trk receptor family.</li> <li>• Exhibits potent inhibition exclusively against TrkA out of 468 kinases, demonstrating an excellent kinase selectivity profile.</li> <li>• Inhibits capsaicin-induced calcium influx in cells co-expressing TrkA and TRPV1, but not in cells expressing TRPV1 alone.</li> <li>• Provides rapid analgesic effects after administration in mouse MIA-induced osteoarthritis.</li> <li>• Persistently alleviates chronic pain without further drug administration following more than 3 weeks of repeated dosing in mouse MIA-induced osteoarthritis.</li> <li>• No mutagenicity observed in AMES, CA, and <i>in vivo</i> MN tests.</li> <li>• hERG IC50 is more than 130-fold higher than unbound Cmax at the effective dose.</li> </ul>
Development Stage	Preclinical
Route of Administration	Oral

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