



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Zuschläge

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- Trockeneiszuschlag
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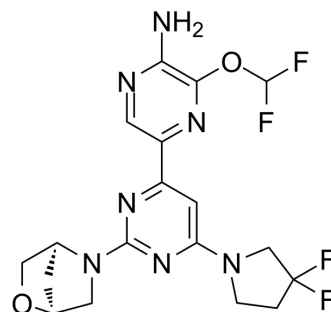
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## DN-1289

<b>Cat. No.:</b>	HY-152142
<b>CAS No.:</b>	3026597-15-6
<b>Molecular Formula:</b>	C <sub>18</sub> H <sub>19</sub> F <sub>4</sub> N <sub>7</sub> O <sub>2</sub>
<b>Molecular Weight:</b>	441.38
<b>Target:</b>	JNK
<b>Pathway:</b>	MAPK/ERK Pathway
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	DN-1289 is an orally active and selective inhibitor of dual leucine zipper kinase (DLK; IC <sub>50</sub> =17 nM) and leucine zipper-bearing kinase (LZK; IC <sub>50</sub> =40 nM). DN-1289 results significant attenuation of optic nerve crush (ONC)-induced p-c-Jun in mice model. DN-1289 has excellent in vivo plasma half-life and blood-brain barrier permeability <sup>[1]</sup> .																																																																				
<b>IC<sub>50</sub> &amp; Target</b>	IC <sub>50</sub> : 17 nM (DLK), 40 nM (LZK) <sup>[1]</sup>																																																																				
<b>In Vitro</b>	<p>DN-1289 (compound 14) (0.1, 0.3, and 1 μM; 0-20 h) can block axon degeneration in dorsal root ganglion (DRG) neurons induced by nerve growth factor (NGF) withdrawal<sup>[1]</sup>.</p> <p>DN-1289 (0.1, 0.3, and 1 μM; 0-20 h) inhibits the activation of caspases in DRG neurons over time induced by NGF withdrawal<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>																																																																				
<b>In Vivo</b>	<p>DN-1289 (compound 14) (100 mg/kg and 150 mg/kg; i.p.; once daily for 10-15 d) is well-tolerated in mice model<sup>[1]</sup>.</p> <p>DN-1289 (150 mg/kg; p.o.; b.i.d. for 10 d) inhibits phosphorylation of c-Jun in an acute injury model with optic nerve crush (ONC) application<sup>[1]</sup>.</p> <p>Pharmacokinetic Analysis<sup>[1]</sup></p> <table border="1"> <thead> <tr> <th>Species</th> <th>Route</th> <th>Dose (mg/kg)</th> <th>plasma C<sub>max</sub> (μM)</th> <th>plasma AUC<sub>0-24 h</sub> (μM·h)</th> <th>CL<sub>p</sub> (mL/min/kg)</th> <th>CL<sub>u</sub> (mL/min/kg)</th> <th>V<sub>d</sub> (L/kg)</th> <th>t<sub>1/2</sub> (h)</th> <th>F (%)</th> <th>K<sub>p<sub>uu</sub></sub> (AUC)</th> <th>brain AUC<sub>0-2 h</sub> (μM·h)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">rat</td> <td>IV</td> <td>1</td> <td>1.09</td> <td>2.42</td> <td>14.7</td> <td>150</td> <td>6.7</td> <td>6.5</td> <td>/</td> <td>0.6</td> <td>4.05</td> </tr> <tr> <td>PO</td> <td>3</td> <td>0.58</td> <td>3.9</td> <td>/</td> <td>/</td> <td>/</td> <td>4.6</td> <td>52</td> <td>/</td> <td>/</td> </tr> <tr> <td rowspan="2">mouse</td> <td>IV</td> <td>1</td> <td>1.06</td> <td>4.06</td> <td>8.6</td> <td>200</td> <td>4.7</td> <td>6.8</td> <td>/</td> <td>/</td> <td>/</td> </tr> <tr> <td>PO</td> <td>10</td> <td>2.32</td> <td>21.9</td> <td>/</td> <td>/</td> <td>/</td> <td>7.9</td> <td>56</td> <td>0.4</td> <td>6.91</td> </tr> </tbody> </table>											Species	Route	Dose (mg/kg)	plasma C <sub>max</sub> (μM)	plasma AUC <sub>0-24 h</sub> (μM·h)	CL <sub>p</sub> (mL/min/kg)	CL <sub>u</sub> (mL/min/kg)	V <sub>d</sub> (L/kg)	t <sub>1/2</sub> (h)	F (%)	K <sub>p<sub>uu</sub></sub> (AUC)	brain AUC <sub>0-2 h</sub> (μM·h)	rat	IV	1	1.09	2.42	14.7	150	6.7	6.5	/	0.6	4.05	PO	3	0.58	3.9	/	/	/	4.6	52	/	/	mouse	IV	1	1.06	4.06	8.6	200	4.7	6.8	/	/	/	PO	10	2.32	21.9	/	/	/	7.9	56	0.4	6.91
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PO	150	24.9	324	/	/	/	23.7	53	/	/
IP	100	15.4	280	/	/	/	23.7	53	/	/
cyno	IV	0.5	0.746	2.79	6.1	64	3.4	7.9	/	/

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## REFERENCES

[1]. Craig RA 2nd, et al. Discovery of Potent and Selective Dual Leucine Zipper Kinase/Leucine Zipper-Bearing Kinase Inhibitors with Neuroprotective Properties in In Vitro and In Vivo Models of Amyotrophic Lateral Sclerosis. *J Med Chem.* 2022 Dec 22;65(24):16290-16312.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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