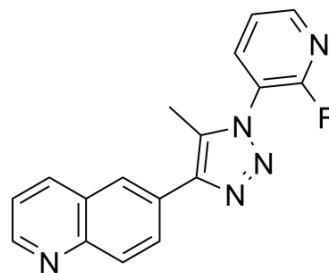


## FPTQ

<b>Cat. No.:</b>	HY-100382	
<b>CAS No.:</b>	864863-72-9	
<b>Molecular Formula:</b>	C <sub>17</sub> H <sub>12</sub> FN <sub>5</sub>	
<b>Molecular Weight:</b>	305.31	
<b>Target:</b>	mGluR	
<b>Pathway:</b>	GPCR/G Protein; Neuronal Signaling	
<b>Storage:</b>	Powder	-20°C    3 years 4°C    2 years
	In solvent	-80°C    6 months -20°C    1 month



## BIOLOGICAL ACTIVITY

<b>Description</b>	FPTQ is potent mGluR <sub>1</sub> antagonist with IC <sub>50</sub> values of 6 nM and 1.4 nM for human and mouse mGluR1 respectively <sup>[1]</sup> . FPTQ has anti-oxidant and anti-inflammatory effects in vitro and in vivo <sup>[2]</sup> .									
<b>IC<sub>50</sub> &amp; Target</b>	Human mGluR1 6 nM (IC <sub>50</sub> )	Mouse mGluR1 1.4 nM (IC <sub>50</sub> )								
<b>In Vitro</b>	<p>FPTQ (0.5-10 μM) does not show any cytotoxicity was not observed at 0.5, 1, 5, and 10 μM in RAW264.7 macrophage cells<sup>[2]</sup>. FPTQ (1-20 μM; 24 hours) reduces LPS-induced NO production at &gt; 1 μM FPTQ, and at 10 μM, FPTQ treatment causes a 31% anti-oxidant effect in RAW264.7 macrophage cells<sup>[2]</sup>.</p> <p>FPTQ (1-20 μM; 24 hours) dramatically decreases LPS-induced expression levels of IL-1β and IL-6. At a concentration of 10 μM, FPTQ causes a 27% and 44% reduction in the mRNA expression of IL-1β and IL-6, respectively in RAW264.7 macrophage cells<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>RT-PCR<sup>[1]</sup></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Cell Line:</td> <td>RAW264.7 macrophage cells</td> </tr> <tr> <td>Concentration:</td> <td>1, 10, or 20 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 hours</td> </tr> <tr> <td>Result:</td> <td>Decreased IL-1β and IL-6 mRNA expression</td> </tr> </table>		Cell Line:	RAW264.7 macrophage cells	Concentration:	1, 10, or 20 μM	Incubation Time:	24 hours	Result:	Decreased IL-1β and IL-6 mRNA expression
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Concentration:	1, 10, or 20 μM									
Incubation Time:	24 hours									
Result:	Decreased IL-1β and IL-6 mRNA expression									
<b>In Vivo</b>	<p>FPTQ (5-20 μM) decreases the number of neutrophils migrating to the amputation site in zebrafish larvae by tail amputation. In the tailfin wound method, the number of neutrophils collecting at the wound site also decreases in a dose-dependent manner in zebrafish<sup>[2]</sup>.</p> <p>In a LPS-induced inflammation zebrafish model, LPS solution is injected into the yolks of Tg(mpx:EGFP)<sup>1114</sup> zebrafish larvae and exposed the zebrafish larvae immediately to FPTQ treatment.</p> <p>FPTQ (20 μM; 4 hours) significantly decreases the fluorescent neutrophils after yolk injection and has an anti-inflammatory effect during the early phase of inflammation<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>									

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## REFERENCES

- [1]. Fujinaga M et al. Synthesis and evaluation of 6-[1-(2-[(18)F]fluoro-3-pyridyl)-5-methyl-1H-1,2,3-triazol-4-yl]quinoline for positron emission tomography imaging of the metabotropic glutamate receptor type 1 in brain. *Bioorg Med Chem*, 2011 Jan 1, 19(1):102-10.
- [2]. Geum Ran Kim, et al. Anti-inflammatory effect of a novel synthetic compound 1-((4-fluorophenyl)thio)isoquinoline in RAW264.7 macrophages and a zebrafish model. *Fish Shellfish Immunol*. 2019 Apr;87:395-400.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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