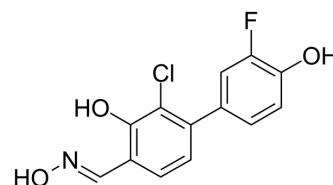


FERb 033

Cat. No.:	HY-103446
CAS No.:	1111084-78-6
Molecular Formula:	C ₁₃ H ₉ ClFNO ₃
Molecular Weight:	281.67
Target:	Estrogen Receptor/ERR
Pathway:	Vitamin D Related/Nuclear Receptor
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	FERb 033 is a selective and potent ERβ agonist (K _i =7.1 nM, EC ₅₀ =4.8 nM). FERb 033 shows 62-fold selectivity over ERα ^[1] .																	
IC₅₀ & Target	ERβ 4.8 nM (EC ₅₀)	ERβ 7.1 nM (K _i)																
In Vitro	<p>FERb 033 (0-100 μM) shows specificity on full-length of estrogen receptor (ESR) in transactivation^[2]. FERb 033 (10 nM, 2 h) treatment mildly decreases Ca₂₊ response in airway smooth muscle (ASM) cells^[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay^[2]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>HEK293 cells</td> </tr> <tr> <td>Concentration:</td> <td>0-100 μM</td> </tr> <tr> <td>Incubation Time:</td> <td></td> </tr> <tr> <td>Result:</td> <td>Induced transcriptional activity via full-length receptor on ERE with EC₅₀ values of 0.253 and 0.053 μM for ESR1 and ESR2, respectively.</td> </tr> </table> <p>Cell Viability Assay^[3]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>ASM cells</td> </tr> <tr> <td>Concentration:</td> <td>10 nM</td> </tr> <tr> <td>Incubation Time:</td> <td>2 hours</td> </tr> <tr> <td>Result:</td> <td>Tended to decrease histamine-elicited Ca²⁺ response in nonasthmatic human ASM cells but not significantly compared to the control.</td> </tr> </table>		Cell Line:	HEK293 cells	Concentration:	0-100 μM	Incubation Time:		Result:	Induced transcriptional activity via full-length receptor on ERE with EC ₅₀ values of 0.253 and 0.053 μM for ESR1 and ESR2, respectively.	Cell Line:	ASM cells	Concentration:	10 nM	Incubation Time:	2 hours	Result:	Tended to decrease histamine-elicited Ca ²⁺ response in nonasthmatic human ASM cells but not significantly compared to the control.
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REFERENCES

[1]. Filippo Minutolo, et al. Structural evolutions of salicylaldoximes as selective agonists for estrogen receptor beta. J Med Chem. 2009 Feb 12;52(3):858-67.

[2]. Satomi Kohno, et al. Estrogen receptor 1 (ESR1; ER α), not ESR2 (ER β), modulates estrogen-induced sex reversal in the American alligator, a species with temperature-dependent sex determination. *Endocrinology*. 2015 May;156(5):1887-99.

[3]. Sangeeta Bhallamudi, et al. Estrogen receptors differentially regulate intracellular calcium handling in human nonasthmatic and asthmatic airway smooth muscle cells. *Am J Physiol Lung Cell Mol Physiol*. 2020 Jan 1;318(1):L112-L124.

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

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