

# Small Molecules

CH223191

Aryl hydrocarbon receptor (AHR) antagonist

Catalog # 72732  
72734

10 mg  
50 mg



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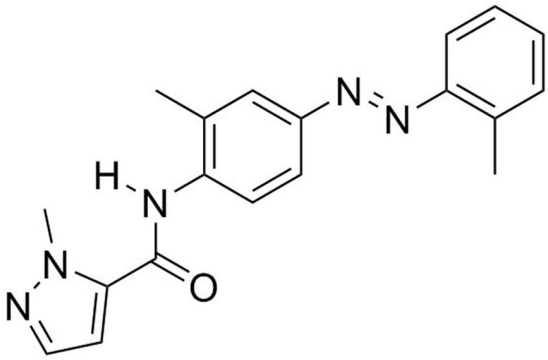
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## Product Description

CH223191 is a potent and specific antagonist of the aryl hydrocarbon receptor (AhR) that blocks activation by 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD;  $IC_{50} = 0.03 \mu M$ ; Kim et al.). It prevents the induction of cytochrome P450 1A1 by TCDD in HepG2 cells and in livers of mice (Kim et al.).

Molecular Name:	CH223191
Alternative Names:	Not applicable
CAS Number:	301326-22-7
Chemical Formula:	$C_{19}H_{19}N_5O$
Molecular Weight:	333.4 g/mol
Purity:	$\geq 95\%$
Chemical Name:	1-methyl-N-[2-methyl-4-[2-(2-methylphenyl)diazenyl]phenyl]-1H-pyrazole-5-carboxamide
Structure:	

## Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at $-20^{\circ}C$ as supplied. Protect from prolonged exposure to light. For product expiry date, please contact <a href="mailto:techsupport@stemcell.com">techsupport@stemcell.com</a> .
Solubility:	<ul style="list-style-type: none"><li>· Absolute ethanol <math>\leq 300 \mu M</math></li><li>· DMSO <math>\leq 75 mM</math></li></ul> For example, to prepare a 10 mM stock solution in DMSO, resuspend 1 mg in 300 $\mu L$ of fresh DMSO.

Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at  $-20^{\circ}C$ . Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.

## Published Applications

### MAINTENANCE AND SELF-RENEWAL

- Induces expansion of human CD34+ hematopoietic stem and progenitor cells in culture (Boitano et al.).

## References

Boitano AE et al. (2010) Aryl hydrocarbon receptor antagonists promote the expansion of human hematopoietic stem cells. *Science* 329(5997): 1345–8.

Kim S-H et al. (2006) Novel compound 2-methyl-2H-pyrazole-3-carboxylic acid (2-methyl-4-o-tolylazo-phenyl)-amide (CH-223191) prevents 2,3,7,8-TCDD-induced toxicity by antagonizing the aryl hydrocarbon receptor. *Mol Pharmacol* 69(6): 1871–8.

## Related Small Molecules

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