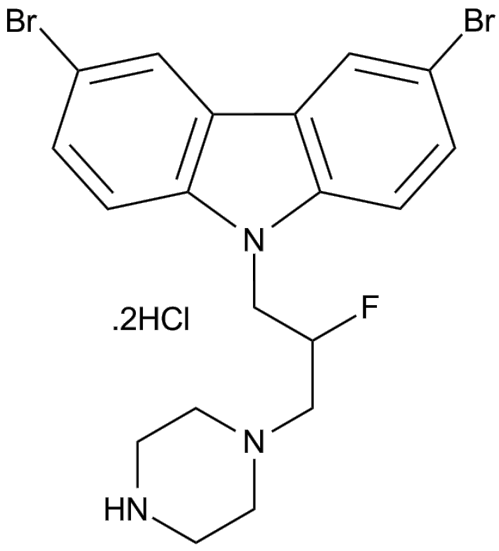
Product Data Sheet

Product Name: iMAC2
Cat. No.: GC12046

Chemical Properties

Cas. No.	335166-00-2		
Chemical Name	3,6-dibromo-9-(2-fluoro-3-(piperazin-1-yl)propyl)-9H-carbazole		
SMILES	FC(CN1CCNCC1)CN2C3=C(C=C(Br)C=C3)C4=C2C=CC(Br)=C4		
Formula	$C_{19}H_{20}Br_2FN_3.2HCl$	M.Wt	542.11
Solubility	DMSO: 2.71 mg/mL	Storage	Desiccate at RT
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Background

iMAC2 is the inhibitor of mitochondrial apoptosis-induced channel (MAC) with the IC50 value of 28 nM[1]. MAC is a putative cytochrome c release channel involved in the intrinsic apoptotic pathway. MAC has been associated with oligomeric, not monomeric, Bax[2]. By blocking MAC and

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suppressing cytochrome c release, iMAC2 suppressed the onset of apoptotic markers [1].

In vitro: In cultured apoptotic FL5.12 cells, pre-treatment with iMAC2 resulted in a normal volume and residual Annexin V/PI staining. iMAC2 reduced apoptosis by more than 50%. Pre-treatment with iMAC2 induced a significant protection at low micromolar levels (IC50 = 2.5 μM). Pre-incubation with iMAC2 and iMAC3 essentially eliminated the release of cytochrome c ($P < 0.0001$) while nanomolar levels of iMAC2 completely blocked the current flow through MAC. iMAC2 inhibited release of cytochrome c by Bid-induced Bax activation with the IC50 values of 0.68 μM [1].

References:
[1] Peixoto PM1, Ryu SY, Bombrun A, Antonsson B, Kinnally KW. MAC inhibitors suppress mitochondrial apoptosis.Biochem J. 2009 Oct 12;423(3):381-7.
[2] Dejean L M, Martinez-Caballero S, Guo L, et al. Oligomeric Bax is a component of the putative cytochrome c release channel MAC, mitochondrial apoptosis-induced channel[J]. Molecular biology of the cell, 2005, 16(5): 2424-2432.