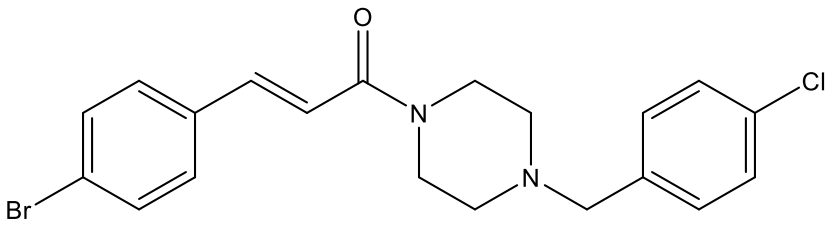
Catalog # 10-5280

ML401

CAS# 1597489-14-9

(E)-3-(4-BGromophenyl)-1-(4-(4-chlorobenzyl)piperazin-1-yl)prop-2-en-1-one; CID73169083

Lot # S107138



ML401 is a potent antagonist of GPR183 (IC_{50} = 1.03 nM), also known as EBI2 or Epstein-Barr virus-induced gene 2. ML401 inhibited 7α,25-dihydroxycholesterol-induced RS11846 cell chemotaxis, IC_{50}=6 nM.[1] GPR183 is a key chemotactic receptor guiding B cell localization to appropriate microenvironments for activation and differentiation.[2] It also regulates the homeostasis, localization and immunological function of splenic dendritic cells.[3] Oxysterols have been shown to be endogenous ligands for GPR183 with 7α,25-dihydroxycholesterol being the most potent (K_d=450 pM).[4]

1) Ardecky *et al.* (2010), *Functional Antagonists of EBI-2*; Probe Reports from the NIH Libraries Program Bethesda (MD): National Center for Biotechnology Information (US); 2010, 2014, Apr. 15 **12** 369
2) Gatto and Brink (2013), *B cell localization: regulation by EBI2 and its oxysterol ligand*; Trends Immunol. **34** 336
3) Gatto *et al.* (2013), *The chemotactic receptor EBI2 regulates the homeostasis, localization and immunological function of splenic dendritic cells*; Nat. Immunol. **14** 446
4) Liu *et al*. (2011), *Oxysterols direct B-cell migration through EBI2*; Nature **475** 519

PHYSICAL DATA

Molecular Weight:	419.75
Molecular Formula:	$C_{20}H_{20}BrClN_2O$
Purity:	>98% by TLC NMR: (Conforms)
Solubility:	DMSO (45 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied at -20C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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