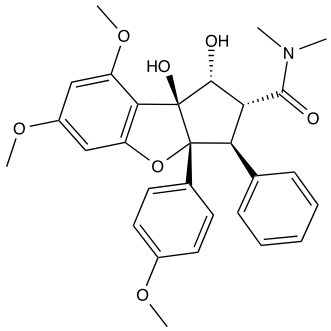
Rocaglamide
Cat# 10-2484

CAS# 84573-16-0

Lot # FBM2157



Rocaglamide is a potent inhibitor of NFkB in T-lymphocytes with almost complete inhibition at 200nM.[1] It was able to completely inhibit IL-4 and IFN-γ production and suppress 60-85% of IL-2 and TNF-α production at 50nM in T-cells without inhibiting AP-1 and NF-kB (conversely, at concentrations <100nM, it was shown to increase NF-kB activity).[2] Immunosuppression activity was due to inhibition of cytokine gene expression via blocking of NF-AT activity and is a different mechanism than suppression *via* Cyclosporine a and FK-506. Rocaglamide has anti-cancer properties via various pathways including ERK inhibition[3], ATM/ATR-Chk1/Chk2 activation[4], and p38 and JNK activation[5].

1) Baumann *et al.* (2002), *Rocaglamide Derivatives Are Potent Inhibitors of NF-kB Activation in T-cells*; J.Biol.Chem. **277** 44791
2) Prolsch *et al.* (2005), *Rocaglamide Derivatives Are Immunosuppressive Phytochemicals That Target NF-AT Activity in T Cells*; J.Immunol. **174** 7075
3) Polier *et al.* (2012), *The natural anticancer compounds rocaglamides inhibit the Raf-MEK-ERK pathway by targeting prohibitin1 and 2*; Chem.Biol. **19** 1093
4) Neumann *et al.* (2014), *The natural anticancer compound rocaglamide selectively inhibits the G1-S phase transition in cancer cells through the ATM/ATR-mediated Chk1/2 cell cycle checkpoints*; Int.J.Cancer **134** 1991
5) Zhu *et al.* (2007), *The traditional Chinese herbal compound rocaglamide preferentially induces apoptosis in leukemia cells by modulation of mitogen-activated protein kinase activities*; Int.J.Cancer **121** 1839

PHYSICAL DATA

Molecular Weight:	505.57
Molecular Formula:	$C_{29}H_{31}NO_7$
Purity:	>97% by HPLC (Ascentis Express C18; 77:23, MeOH/water pH 5.6; 1.0 mL/min; 210nm)
Solubility:	DMSO and ethanol
Physical Description:	White solid/thin film
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Solutions in DMSO or ethanol may be stored at 20°C for up to 1 month. Protect from exposure to moisture and light.

Focus Biomolecules LLC 400 Davis Dr. Suite 600 Plymouth Meeting, PA 19462

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