

Product Name:	UCN-01
Product Number:	U005
CAS Number:	112953-11-4
Molecular Formula:	$C_{28}H_{26}N_4O_4$
Molecular Weight:	482.5
Appearance:	White Film
Storage Conditions:	-20°C
Description:	<p>UCN-01 is an indolocarbazole isolated from a high staurosporine-producing <i>Streptomyces</i> culture. UCN-01 enhances the cytotoxicity of other anti-cancer drugs, such as DNA-damaging agents and anti-metabolite drugs, through putative abrogation of G2 and/or S phase accumulation induced by the latter agents.</p> <p>UCN-01 is soluble in ethanol, methanol, DMF and DMSO.</p>
Mechanism of Action:	<p>UCN-01 inhibits protein kinase C (PKC) and cyclin-dependant kinase 2 (CDK2), resulting in accumulation of cells in the G1 phase and induction of apoptosis.</p>
References:	<p>UCN-01-induced cell cycle arrest requires the transcriptional induction of p21(waf1/cip1) by activation of mitogen-activated protein/extracellular signal-regulated kinase kinase/extracellular signal-regulated kinase pathway. Facchinetti M.M. et al. <i>Cancer Res.</i> 2004, 64, 3629.</p> <p>UCN-01 (7-hydroxystaurosporine) and other indolocarbazole compounds: a new generation of anti-cancer agents for the new century? Akinaga S. et al. <i>Anticancer Drug Des.</i> 2000, 15, 43.</p> <p>UCN-01 and UCN-02, new selective inhibitors of protein kinase C. II. Purification, physico-chemical properties, structural determination and biological activities. Takahashi I. et al. <i>J. Antibiot.</i> 1989, 42, 571.</p>