



## Product Information

Product ID I5313

CAS No. 157810-81-6

**Chemical Name**

Synonym Crixivan

Formula  $C_{36}H_{47}N_5O_4 \cdot H_2O_4S$

Formula Wt. 711.87

Melting Point

Purity  $\geq 98\%$

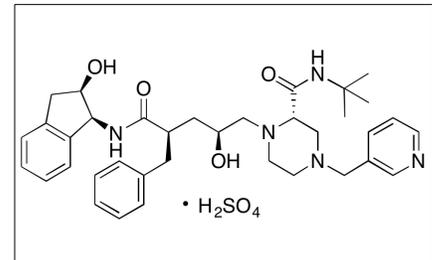
Solubility Soluble in Water

Store Temp Ambient

Ship Temp Ambient

**Description**

Indinavir is an antiviral drug that treats HIV, acting as a protease inhibitor; this compound also exhibits anti-diabetic and anticancer chemotherapeutic activities. Like other antivirals, indinavir also exerts effects on insulin resistance and glucose tolerance. In vitro, indinavir decreases phosphorylation of the insulin receptor  $\beta$  subunit, inhibits the GLUT4 glucose transporter, and decreases levels of the insulin receptor, sterol regulatory element binding protein 1 (SREBP1), and PPAR- $\gamma$ , impairing adipocyte function and altering insulin sensitivity. In diabetic rats, indinavir increases glucose tolerance and hyperglycemia, potentially through induction of the suppressor of cytokine signaling 1 (SOCS1) signaling cascade. Indinavir may also exhibit chemotherapeutic potential, as it inhibits adenocarcinoma tumor growth in vivo; this activity may be dependent on inhibition of matrix metalloproteinases. Additionally, indinavir inhibits multiple isoforms of calpain, preventing apoptosis in cellular models.



**Bulk quantities available upon request**

Product ID	Size
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I5313	100 mg
I5313	1 g
I5313	5 g
I5313	25 g

**References** Ismail WI, King JA, Anwar K, et al. Indinavir and nelfinavir inhibit proximal insulin receptor signaling and salicylate abrogates inhibition: potential role of the NF $\kappa$ B pathway. *J Cell Biochem.* 2013 Aug;114(8):1729-37. PMID: 23386514.

Toschi E, Sgadari C, Malavasi L, et al. Human immunodeficiency virus protease inhibitors reduce the growth of human tumors via a proteasome-independent block of angiogenesis and matrix metalloproteinases. *Int J Cancer.* 2011 Jan 1;128(1):82-93. PMID: 20617515.

Carper MJ, Cade WT, Cam M, et al. HIV-protease inhibitors induce expression of suppressor of cytokine signaling-1 in insulin-sensitive tissues and promote insulin resistance and type 2 diabetes mellitus. *Am J Physiol Endocrinol Metab.* 2008 Mar;294(3):E558-67. PMID: 18171911.

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Murata H, Hruz PW, Mueckler M. Indinavir inhibits the glucose transporter isoform Glut4 at physiologic concentrations. *AIDS.* 2002 Apr 12;16(6):859-63. PMID: 11919487.

Caron M, Auclair M, Vigouroux C, et al. The HIV protease inhibitor indinavir impairs sterol regulatory element-binding protein-1 intranuclear localization, inhibits preadipocyte differentiation, and induces insulin resistance. *Diabetes.* 2001 Jun;50(6):1378-88. PMID: 11375339.

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.