



LKT Laboratories, Inc.

Irbesartan

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## Product Information

Product ID I6804

CAS No. 138402-11-6

Chemical Name 2-Butyl-3-[[2'-(1H-tetrazol-5-yl)[1,1'-biphenyl]-4-yl]methyl]-1,3-diazaspiro[4,4]non-1-en-4-one

Synonym Aprovel, Avapro

Formula  $C_{25}H_{28}N_6O$

Formula Wt. 428.53

Melting Point 180-181 °C

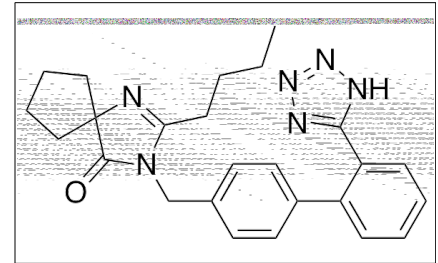
Purity  $\geq 98\%$

Solubility

Store Temp Ambient

Ship Temp Ambient

**Description** Irbesartan is an angiotensin II type 1 (AT1) receptor inhibitor that also activates PPAR $\gamma$  receptors; it exhibits antihypertensive, cardioprotective, and anti-hyperlipidemic activities. In angiotensin-converting enzyme 2 (ACE2)-deficient mice, irbesartan decreases TGF- $\beta$ 1, atrial natriuretic factor, collagen, and phospho-ERK1/2 expression and increases PPAR $\gamma$  expression, reversing cardiac hypertrophy and myocardial fibrosis. In animal models of angiotensin II (ATII)-mediated abdominal aortic aneurysm, irbesartan prevents macrophage infiltration, pro-inflammatory cytokine release, smooth muscle attenuation, and medial elastolysis, and also limits aneurysm enlargement. In obese hypertensive rats, this compound decreases plasma levels of free fatty acids, triglycerides, and insulin; it also upregulates expression of hepatic PPAR $\alpha$ . In high fat diet rats, irbesartan decreases body weight and adipose tissue weight and improves glucose metabolism and vascular function.



**Bulk quantities available upon request**

Product ID	Size
I6804	50 mg
I6804	1 g
I6804	5 g
I6804	25 g

**References** Zhang ZZ, Shang QH, Jin HY, et al. Cardiac protective effects of irbesartan via the PPAR-gamma signaling pathway in angiotensin-converting enzyme 2-deficient mice. *J Transl Med.* 2013 Sep 25;11(1):229. PMID: 24067190.

lida Y, Xu B, Schultz GM, et al. Efficacy and mechanism of angiotensin II receptor blocker treatment in experimental abdominal aortic aneurysms. *PLoS One.* 2012;7(12):e49642. PMID: 23226500

Rong X, Li Y, Ebihara K, et al. Irbesartan treatment up-regulates hepatic expression of PPAR $\alpha$  and its target genes in obese Koletsky (fa(k)/fa(k)) rats: a link to amelioration of hypertriglyceridaemia. *Br J Pharmacol.* 2010 Aug;160(7):1796-807. PMID: 20649581

de las Heras N, Martín-Fernández B, Miana M, et al. The protective effect of irbesartan in rats fed a high fat diet is associated with modification of leptin-adiponectin imbalance. *J Hypertens Suppl.* 2009 Aug;27(6):S37-41. PMID: 19633450.

Siragy H. Angiotensin II receptor blockers: review of the binding characteristics. *Am J Cardiol.* 1999 Nov 18;84(10A):3S-8S. PMID: 10588088.

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