Web: www.taiclone.com
Tel: +886-2-2735-9682
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# IOX2

## Catalog No: tcsc0988

### Available Sizes

**Size:** 5mg

**Size:** 10mg

**Size:** 50mg

### Specifications

**CAS No:**
931398-72-0

**Formula:**
$C_{19}H_{16}N_2O_5$

**Pathway:**
Metabolic Enzyme/Protease

**Target:**
HIF/HIF Prolyl-Hydroxylase

**Purity / Grade:**
>98%

**Solubility:**
10 mM in DMSO

**Observed Molecular Weight:**
352.34

## Product Description

IOX2 is a specific prolyl hydroxylase-2 (**PHD2**) inhibitor with **$IC_{50}$**

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of 22 nM.

IC50 & Target: IC50: 22 nM (PHD2)[1]

***In Vitro:*** IOX2 is at least 2-5000 fold selective, as judged by $IC_{50}$ values, for PHD2 over the KDMs and Factor Inhibiting HIF(FIH)[1]. IOX2 significantly upregulates the transcription of VEGF-A and BNIP3 in normal human epidermal keratinocytes (NHEK) and normal human dermal fibroblasts (NHDF) when grown under normoxia and hypoxia. IOX2 efficiently promotes HIF-1α stability, nuclear translocation, and target gene expression in keratinocytes and fibroblasts. In addition, IOX2 significantly upregulates biosynthesis and transcription of VEGF-A and BNIP3 in sulfur mustard (SM)-exposed NHEK and NHDF grown under hypoxia. These results suggest that application of IOX2 is useful for restoring of SM-affected HIF-1α stability and signaling activity in keratinocytes and fibroblasts[2].

***In Vivo:*** To investigate the utility of IOX2 as in vivo functional probes, IOX2 is tested to upregulate HIF signaling in a whole organism, that is, transgenic zebrafish (*Danio rerio*). Because the expression of the PHD3 encoding gene is regulated by HIF in humans and zebrafish, PHD3 levels are a readout of HIF activity. A zebrafish hypoxia reporter line is generated expressing GFP with the phd3 promoter elements. Transgenic wild-type embryos at 3 days postfertilization treated with compounds (10 μM) for 2 days displayed clear increase in phd3:EGFP expression in the liver, relative to controls. Significant increases in GFP levels are observed with IOX2[1].