

# KI696

**Catalog No: tcsc0020903**



## Available Sizes

**Size:** 1mg

**Size:** 5mg

**Size:** 10mg

**Size:** 25mg

**Size:** 50mg

**Size:** 100mg



## Specifications

**CAS No:**

1799974-70-1

**Formula:**

$C_{28}H_{30}N_4O_6S$

**Pathway:**

NF-κB

**Target:**

Keap1-Nrf2

**Purity / Grade:**

>98%

**Solubility:**

10 mM in DMSO

**Observed Molecular Weight:**

550.63

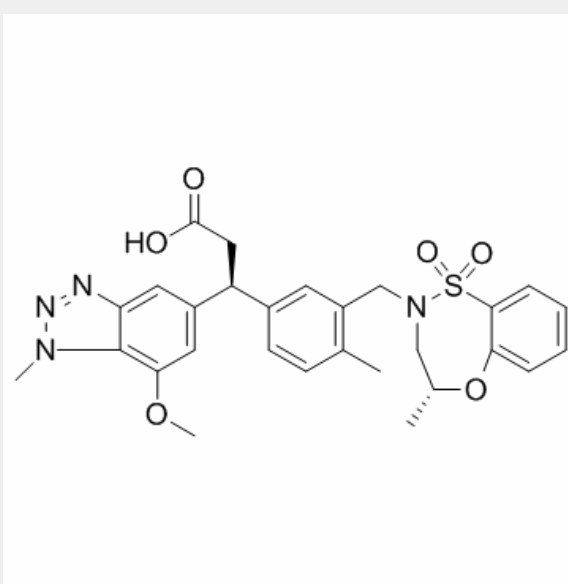
## Product Description

KI696 is a high affinity probe that disrupts the **Keap1/NRF2** interaction.

IC50 & Target: Target: Keap1-NRF2<sup>[1]</sup>

**In Vitro:** KI696 (compound 7) exhibits very high affinity for the KEAP1 Kelch domain (ITC  $K_d=1.3$  nM with the exception of the organic anion transporting polypeptide 1B1 (OATP1B1) ( $IC_{50}=2.5$   $\mu$ M), the bile salt export pump BSEP ( $IC_{50}=4.0$   $\mu$ M), and the phosphodiesterase PDE3A ( $IC_{50}=10$   $\mu$ M), no significant cross-reactivity is observed. No cytotoxicity is observed towards BEAS-2B cells with KI696 at concentrations up to 10  $\mu$ M. KI696 increases NRF2 Nuclear Translocation in Normal Human Bronchial Epithelial cells. KI696 increases mRNA expression of the NRF2-dependent genes NQO1 and GCLM in NHBE cells transfected with the non-targeting siRNA, while NRF2 gene silencing significantly decreases compound activity. KI696 increases NQO1 Activity in an NRF2-Dependent Manner. Treatment with tBHP clearly has a detrimental effect on cell health and appearance while pre-treatment of cells with 1  $\mu$ M KI696 before the exposure to tBHP maintained cell morphology consistent with the DMSO control. KI696 Induces the Expression of NRF2-Regulated Genes in COPD patient-derived bronchial epithelial cells<sup>[1]</sup>.

**In Vivo:** KI696 induces the expression of each of the *Nqo1*, *Ho-1*, *Txnrd1*, *Srxn1*, *Gsta3*, *Gclc* genes in a dose-dependent manner, with maximum increases over vehicle controls of 37-(Nqo1), 17-(Ho-1), 9-(Txnrd1), 28-(Srxn1), 15-(Gsta3) and 13-fold (Gclc) occurring at the 50  $\mu$ mol/kg dose.  $EC_{50}$  values are 44.0, 25.7, 42.6, 33.8, 28.4, and 44.1  $\mu$ mol/kg, respectively, giving an average  $EC_{50}$  value of  $36.4 \pm 3.4$   $\mu$ mol/kg. KI696 attenuates ozone-induced pulmonary inflammation. KI696 restores ozone-induced depletion of lung GSH levels. KI696 is administered to rats at 10, 35 and 50  $\mu$ mol/kg by IV infusion, resulting in steady state compound concentrations in the blood of  $407 \pm 44$  nM,  $946 \pm 50$  nM and  $1437 \pm 186$  nM, respectively, over the 6 hour infusion period. Exposure to ozone 24 hours post-dose produces a significant depletion in lung levels of the anti-oxidant molecule, GSH, which is restored by KI696 in a dose-dependent manner<sup>[1]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!