

# HUMAN PROTEIN KINASE CK2 INHIBITORS DEVELOPED BY OTAVA SCIENTISTS

*NEW!*

**4,5,6,7-Tetraiodo-1,3-dioxo-2-isoindolineacetic acid** - a new CK2 inhibitor from OTAVA with  $IC_{50} = 0.3 \mu M$

**Other Name:** 2-(4,5,6,7-tetraiodo-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl) acetic acid



Chemical Formula:  $C_{10}H_3I_4NO_4$   
Molecular Weight: 708.75

Ref.: Golub et al. **Evaluation of 4,5,6,7-tetrahalogeno-1H-isoindole-1,3(2H)-diones as inhibitors of human protein kinase CK2.** *Biochimica et Biophysica Acta* (2008), 1784, 143-149

Protein kinase CK2 (Casein Kinase 2) is an extremely pleiotropic Ser/Thr kinase with high constitutive activity. The observation of CK2 deregulations in various pathological processes suggests that CK2 inhibitors may have a therapeutic value, particularly as anti-neoplastic and antiviral drugs. The 4,5,6,7-tetrahalogeno-1H-isoindole-1,3(2H)-diones as a novel potent class of CK2 inhibitors is presented. This class of inhibitors was identified by high-throughput docking of the **OTAVA** compound collection in the ATP-binding site of human CK2. The most active compounds are 2-(4,5,6,7-tetraiodo-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl)propanoic acid and 2-(4,5,6,7-tetraiodo-1,3-dioxo-1,3-dihydro-2H-isoindol-2-yl) acetic acid with  $IC_{50}$  values of  $0.15 \mu M$  and  $0.3 \mu M$ , respectively. These inhibitors are ATP-competitive and they only minimally inhibit the activities of protein kinases DYRK1a, MSK1, GSK3 and CDK5. Binding modes for the most active inhibitors are proposed.

<b>OTAVA catolg no.</b>	<b>CAS RN</b>	<b>Amount</b>	<b>Delivery time</b>	<b>Purity</b>
7015980251	19231-60-8	5 mg 25 mg 1 gram	In-stock In-stock In-stock	≥ 95% by CHN analysis & <sup>1</sup> H NMR

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