

## Product Specification Sheet

**Product Name:** ICG-001

**Catalog Number:** C4001

### Technical information:

Chemical Formula:  $C_{33}H_{32}N_4O_4$

CAS #: 847591-62-2; 780757-88-2

Molecular Weight: 548.63

Purity: > 98%

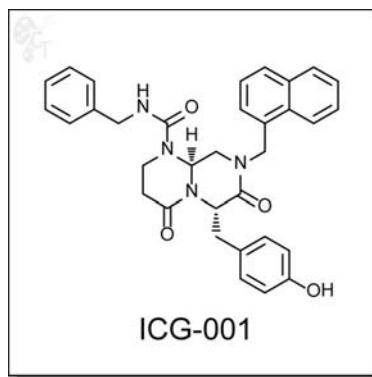
Appearance: White solid

Solubility: Soluble in DMSO up to 100mM

Chemical Name: (6S,9aS)-6-(4-hydroxybenzyl)-N-benzyl-8-(naphthalen-1-ylmethyl)-4,7-dioxo-hexahydro-2H-pyrazino[1,2-a]pyrimidine-1(6H)-carboxamide

Storage: Store solid powder at 4°C desiccated; Store DMSO solution at -20°C.

Shelf Life: In the unopened package, powder is stable for 1 year and DMSO solution is stable for 6 months under proper storage condition.



- Handling:**
- To make 10 mM stock solution, add 0.182mL of DMSO for each mg of ICG-001
  - For DMSO solution, briefly spin the vial at 500 rpm in a 50 mL conical tube to ensure maximum sample recovery.

**Biological Activity:** ICG-001 is a small-molecule antagonist of b-catenin/TCF-mediated transcription ( $IC_{50} = 3 \mu M$ ) and specifically downregulates the expression of a subset of b-catenin/TCF-responsive genes. ICG-001 binds specifically to cyclic AMP response element-binding protein (CBP), thereby disrupting interaction of CBP with b-catenin. [1] ICG-001 selectively induces apoptosis in transformed, but not normal colon cells, and reduces in vitro growth of colon carcinoma cells.

ICG-001 has also been shown to attenuate bleomycin-induced lung fibrosis in mice by selective inhibition of Wnt/b-catenin-dependent transcription. [2]

ICG-001 is believed to correct defects in neuronal stem cell differentiation by inhibition of this pathway [3] and associated polytopic protein Presenilin-1 (PS-1), which suggests potential therapies in Alzheimer's disease.

The wnt/b-catenin signalling pathway has been implicated in regulation of cancer stem cells and ICG-001 has been studied in this regard. [4]

- Reference:**
1. Emami et al., A small molecule inhibitor of beta-catenin/CREB-binding protein transcription. Proc. Natl. Acad. Sci. 2004, 101(34), 12682-12687. Pubmed ID: 15314234
  2. Henderson et al., Inhibition of Wnt/beta-catenin/CREB binding protein (CBP) signaling reverses pulmonary fibrosis. Proc. Natl. Acad. Sci. 2010, 107(32), 14309-14314. Pubmed ID: 20660310
  3. Teo et al., Specific inhibition of CBP/beta-catenin interaction rescues defects in neuronal differentiation caused by a presenilin-1 mutation. Proc. Natl. Acad. Sci. 2005, 102(34), 12171-12176. Pubmed ID: 16093313
  4. Takahashi-Yanaga et al., Targeting Wnt signaling: can we safely eradicate cancer stem cells? Clin. Cancer Res. 2010, 16, 3153-3162. Pubmed ID: 20530697

To reorder: <http://www.cellagentech.com/ICG-001/>

For Technical Support: [technical@cellagentech.com](mailto:technical@cellagentech.com)

*Chemicals are sold for research use only, not for clinical or diagnostic use.*