

## Certificate of Analysis

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**Product Name:** YC 1

**Catalog No.:** 4307

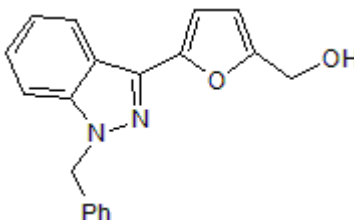
**Batch No.:** 1

CAS Number: 170632-47-0

IUPAC Name: 3-(5'-Hydroxymethyl-2'-furyl)-1-benzyl indazole

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>19</sub>H<sub>16</sub>N<sub>2</sub>O<sub>2</sub>  
**Batch Molecular Weight:** 304.34  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 100 mM  
ethanol to 50 mM  
**Storage:** Store at RT  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.2 (Ethyl acetate:Petroleum ether [4:1])  
**HPLC:** Shows 99.5% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	74.98	5.3	9.2
Found	74.99	5.4	9.32

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Description:**

Nitric oxide-independent activator of soluble guanylyl cyclase (sGC). Significantly elevates cGMP levels and inhibits collagen-stimulated aggregation of washed rabbit platelets ( $IC_{50} = 14.6 \mu M$ ); induces relaxation in denuded phenylephrine-contracted rabbit aortic rings ( $EC_{50} = 1.9 \mu M$ ). Also displays antiproliferative activity in vitro and in vivo by inducing G<sub>1</sub> cell cycle arrest in two human hepatocellular carcinoma (HCC) cell lines, and in HCC xenografts in athymic SCID mice. Exhibits low cytotoxicity in non-malignant cells.

**Physical and Chemical Properties:**

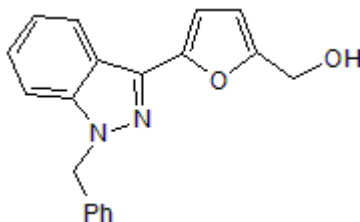
Batch Molecular Formula: C<sub>19</sub>H<sub>16</sub>N<sub>2</sub>O<sub>2</sub>

Batch Molecular Weight: 304.34

Physical Appearance: White solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**Storage:** Store at RT

**Solubility & Usage Info:**

DMSO to 100 mM  
ethanol to 50 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Ko et al** (1994) YC-1, a novel activator of platelet guanylate cyclase. *Blood*. **84** 4226. PMID: 7527671.

**Martin et al** (2001) YC-1 activation of human soluble guanylyl cyclase has both heme-dependent and heme-independent components. *Proc.Natl.Sci.U.S.A.* **98** 12938. PMID: 11687640.

**Wang et al** (2005) YC-1 [3-(5'-hydroxymethyl-2'-furyl)-1-benzyl indazole] exhibits a novel antiproliferative effect and arrests the cell cycle in G0-G1 in human hepatocellular carcinoma cells. *J.Pharmacol.Exp.Ther.* **312** 917. PMID: 15525795.

**Teixeira et al** (2006) Molecular mechanisms underlying rat mesenteric artery vasorelaxation induced by the nitric oxide-independent soluble guanylyl cyclase stimulators BAY 41-2272 [5-cyclopropyl-2-[1-(2-fluorobenzyl)-1H-pyrazolo[3,4-b]pyridin-3-yl]pyrimidin-4-ylamine] and YC-1 [3-(5'-hydroxymethyl-2'-furyl)-1-benzyl indazole]. *J.Pharmacol.Exp.Ther.* **317** 258. PMID: 16352702.

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