

Product Name: EGCG

Catalog No.: 4524

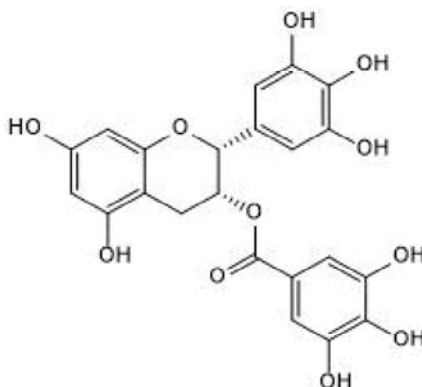
Batch No.: 4

CAS Number: 989-51-5

IUPAC Name: 3,4,5-Trihydroxybenzoic acid (2*R*,3*R*)-3,4-dihydro-5,7-dihydroxy-2-(3,4,5-trihydroxyphenyl)-2*H*-1-benzopyran-3-yl ester

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₂₂ H ₁₈ O ₁₁ · ³ / ₄ H ₂ O
Batch Molecular Weight:	471.88
Physical Appearance:	Pale pink solid
Solubility:	water to 10 mM DMSO to 100 mM
Storage:	Store at -20°C
Batch Molecular Structure:	



2. ANALYTICAL DATA

HPLC:	Shows 97.9% purity
¹H NMR:	Consistent with structure
Mass Spectrum:	Consistent with structure
Optical Rotation:	[α] _D = -164.7 (Concentration = 1, Solvent = Ethanol)
Microanalysis:	Carbon Hydrogen Nitrogen
	Theoretical 56 4.16
	Found 56.04 4.15

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

Product Name: EGCG

Catalog No.: 4524

Batch No.: 4

CAS Number: 989-51-5

IUPAC Name: 3,4,5-Trihydroxybenzoic acid (2*R*,3*R*)-3,4-dihydro-5,7-dihydroxy-2-(3,4,5-trihydroxyphenyl)-2*H*-1-benzopyran-3-yl ester

Description:

EGCG is a β -secretase (BACE1) inhibitor ($IC_{50} = 1.6 \mu M$); inhibits amyloid assembly. Inhibits the formation of amyloid fibrils by proteins such as $A\beta$, α -synuclein and huntingtin. Reduces $A\beta_{42}$ -induced cell death in three different cell types. Also inhibits glutamate dehydrogenase. Inhibits cell growth and selectively induces apoptosis in A431 and human pancreatic cancer cells. Also a DNMT1 inhibitor.

Physical and Chemical Properties:

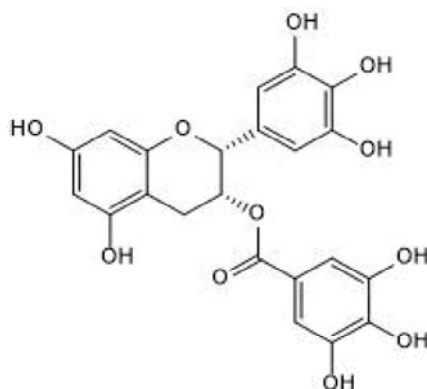
Batch Molecular Formula: $C_{22}H_{18}O_{11} \cdot \frac{3}{4}H_2O$

Batch Molecular Weight: 471.88

Physical Appearance: Pale pink solid

Minimum Purity: $\geq 98\%$

Batch Molecular Structure:



References:

Sinha et al (2012) Comparison of three amyloid assembly inhibitors: the sugar *scyllo*-inositol, the polyphenol epigallocatechin gallate, and the molecular tweezer CLR01. *ACS Chem.Neurosci.* **3** 451. PMID: 22860214.

Yang et al (2009) Glioblastoma cells require glutamate dehydrogenase to survive impairments of glucose metabolism or Akt signaling. *Cancer Res.* **69** 7986. PMID: 19826036.

Shankar et al (2008) EGCG inhibits growth, invasion, angiogenesis and metastastasis of pancreatic cancer. *Front.Biosci.* **13** 440. PMID: 17981559.

Storage: Store at $-20^{\circ}C$

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

water to 10 mM

DMSO to 100 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 $45-60^{\circ}C$ 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 $-20^{\circ}C$ or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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

bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel:+1 612 379 2956