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DATASHEET

Theanine

Product overview

Name	Theanine
Cat No	HB0612
Biological action	Other
Description	Amino acid analog of Glutamine. Promotes hESC self-renewal.

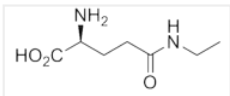
Biological Data

Biological description	Amino acid analog of Glutamine. Also binds to NMDA glycine, kainate and AMPA receptors (IC_{50} values are 347, 41.5 and 24.6 μ M respectively). Blood brain barrier permeable and down regulates COX-2 expression. Displays antioxidant and neuroprotective properties. Also promotes hESC self-renewal.
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Solubility & Handling

Storage instructions	Room temperature
Solubility overview	Soluble in water (100mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	N-Ethyl-L-glutamine
Molecular Weight	174.2
Chemical structure	
Molecular Formula	$C_7H_{14}N_2O_3$
CAS Number	3081-61-6
PubChem identifier	439378
SMILES	<chem>CCNC(CC[C@H](N)C(=O)O)=O</chem>
InChiKey	DATAGRPVKZEWAH-YFKPBYRVSA-N

References

Theanine improves the function of dendritic cells via the downregulation of cyclooxygenase-2 expression.

Lei M *et al* (2014) Chin Med J (Engl) 127(8)
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Effect of theanine, r-glutamylethylamide, on brain monoamines and striatal dopamine release in conscious rats.

Yokogoshi H *et al* (1998) Neurochem Res 23(5)
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Inhibition by theanine of binding of [3H]AMPA, [3H]kainate, and [3H]MDL 105,519 to glutamate receptors.

Kakuda T *et al* (2002) Biosci Biotechnol Biochem 66(12)

PubMedID [12596867](#)

Cancer stem cells: potential target for bioactive food components.

Kim YS *et al* (2012) J Nutr Biochem 23(7)

PubMedID [22704055](#)
