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## DATASHEET

Theanine

### Product overview

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

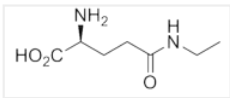
### Biological Data

<b>Biological description</b>	Amino acid analog of Glutamine. Also binds to NMDA glycine, kainate and AMPA receptors ( $IC_{50}$ values are 347, 41.5 and 24.6 $\mu$ 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

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

### Chemical Data

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

**PubMedID** [24762604](#)

**Effect of theanine, r-glutamylethylamide, on brain monoamines and striatal dopamine release in conscious rats.**

Yokogoshi H *et al* (1998) Neurochem Res 23(5)

**PubMedID** [9566605](#)

**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](#)

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