

Product datasheet

Ionotropic Agonists Kit ab120323

1 References

製品の概要

製品名	Ionotropic Agonists Kit
特異性	A collection of 8 agonists, antagonists and potentiators at AMPA, Kainate and NMDA receptors. Products are freeze-dried to an exact weight so that addition of 1 ml or 0.5 ml of solvent provides a stock solution of 5 mM or 10 mM, respectively. The kit contains (S)-AMPA, (ab120005), (S)-5-Fluorowillardiine hydrochloride (ab120399), Cyclothiazide (ab120061), Aniracetam (ab120316), Kainic acid (ab120100), (S)-5-Iodowillardiine hydrochloride (ab120401), NMDA (ab120052) and D-serine (ab120048).

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Receptor

Description

AMPA**(S)-AMPA:**

AMPA agonist.

Suggested Solvent: Water**AMPA****Cyclothiazide:**

Positive allosteric modulator of AMPA receptors. Produces a fast inhibition of AMPA receptor desensitization and a much slower potentiation of the AMPA current.

Suggested Solvent: DMSO

AMPA

Aniracetam:

Nootropic, positive allosteric modulator of AMPA receptors. Slows AMPA receptor deactivation and desensitisation. Antidepressant and anxiolytic *in vivo*.

Suggested Solvent: DMSO

Kainate

Kainic acid:

Prototypic agonist at the kainate class of ionotropic glutamate receptors. Potent excitant and neurotoxin, used to model epilepsy and neurodegenerative states.

Suggested Solvent: Water

Kainate

NMDA:

Excitotoxic amino acid. Prototypic agonist at the ionotropic NMDA glutamate receptor which is involved in long-term potentiation, ischemia, and epilepsy.

Suggested Solvent: Water

NMDA

D-Serine:

Agonist at the NMDA glycine binding site and the inhibitory post-synaptic glycine receptor.

Suggested Solvent: Water

特記事項

Providing storage is as stated on the product vial and the vial is kept tightly sealed, the product can be stored for up to 6 months.

Wherever possible, you should prepare and use solutions on the same day. However, if you need to make up stock solutions in advance, we recommend that you store the solution as aliquots in tightly sealed vials at -20°C. Generally, these will be useable for up to one week. Before use, and prior to opening the vial we recommend that you allow your product to equilibrate to room temperature for at least 1 hour.

KIT

製品の特性

保存方法

Store at -20°C. Please refer to protocols.

内容	1 kit
<u>ab120005 - (S)-AMPA</u>	1 vial
<u>ab120316 - Aniracetam</u>	1 vial
<u>ab120061 - Cyclothiazide</u>	1 vial
<u>ab120048 - D-Serine</u>	1 vial
<u>ab120100 - Kainic acid</u>	1 vial
<u>ab120052 - NMDA</u>	1 vial

機能

Ionotropic glutamate receptor. L-glutamate acts as an excitatory neurotransmitter at many synapses in the central nervous system. Binding of the excitatory neurotransmitter L-glutamate induces a conformation change, leading to the opening of the cation channel, and thereby converts the chemical signal to an electrical impulse. The receptor then desensitizes rapidly and enters a transient inactive state, characterized by the presence of bound agonist.

組織特異性

Widely expressed in brain.

配列類似性

Belongs to the glutamate-gated ion channel (TC 1.A.10.1) family. GRIA1 subfamily.

翻訳後修飾

Palmitoylated. Depalmitoylated upon glutamate stimulation. Cys-603 palmitoylation leads to Golgi retention and decreased cell surface expression. In contrast, Cys-829 palmitoylation does not affect cell surface expression but regulates stimulation-dependent endocytosis.

細胞内局在

Cell membrane. Endoplasmic reticulum membrane. Cell junction > synapse > postsynaptic cell membrane. Interaction with CACNG2 promotes cell surface expression.

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