

Technology Offer

Cytokinin Receptor Antagonists and Compositions Containing these Derivatives

Ref.No. 07114

Background

Cytokinins are plant hormones involved in cell division, shoot meristem and leaf formation, chloroplast biogenesis, and senescence. The development of agonists and antagonists with a particular physiological effect is useful in mechanism-of-action studies of biologically active natural products. The potent naturally occurring cytokinin N6-isopentenyladenine served as the basis for initial structure-activity studies.

Technology

We offer substituted 6-(alkylbenzylamino)-purin derivatives as cytokinin receptor antagonists to provide cytokinin analogons for growth regulation in plants and to offer the possibility for a specific selectivity for cytokinin receptors without being toxic for animal cells. The derivatives can be used to influence morphology, leading to:

- ▶ Increased root growth, fruit or grain size
- ▶ Stimulation of root branching and enhanced number of lateral roots
- ▶ Accelerated seed germination
- ▶ Enhanced yield and quality of crops

Benefits

- ▶ **Non toxic for animal cells**
- ▶ **Efficiency is proven in various test systems**
- ▶ **Suitable regulator for proliferation and morphogenesis in tissue culture**

Industry

Agriculture industry

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Keywords

6-(alkylbenzylamino)-purin derivatives, purin derivatives, cytokinin receptor antagonist, cytokinin analogons, plant growth regulator

Development Stage

Green house (plant model *Arabidopsis thaliana*)

IP Rights

Czech Patent Application
PCT Patent Application
National Applications USA, Europe

Origin

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