

## Biosafety Clearing-House (BCH)

GENETIC ELEMENT (GENE)

BCH-GENE-SCBD-15378-5

LAST UPDATED: 27 JUL 2012

### General information

Name of genetic element

phyA gene

EN

Abbreviation

CS-phyA

EN

Category

Protein coding sequence

Is this genetic element a synthetic molecule?

No

### Donor organism

Donor organism(s)

[BCH-ORGA-SCBD-15377-4](#) ORGANISM | ASPERGILLUS NIGER

Fungi

### Characteristics of the protein coding sequence

Name of the protein expressed by the coding sequence

myo-inositol-hexakisphosphate-3-phosphohydrolase (3-phytase)

EN

Biological function of the protein

The phy gene produces a fungal 3-phytase. This enzyme can be utilized to increase the breakdown of plant phytates which bind phosphorus. Phytate is the major storage form of phosphorus in many seeds and phytate-bound phosphorus is unavailable to monogastric animals. Since monogastric animals are not able to degrade this molecule, much of the phosphorus bound to phytate passes into the environment through the manure. Use of the enzyme and appropriate management techniques can lead to a reduction in the phosphorus content of manure, thus improving environmental conditions.

EN

Related trait(s) or use(s) in biotechnology

Changes in quality and/or metabolite content  
Other

Phytate degradation

### Additional Information

Other relevant website addresses and/or attached documents

? [USFDA Biotechnology Consultation Note BNF No. 000052](#) ( *English* )

[BCH-GENE-SCBD-15378-5](#)

## Further Information

Questions about the Cartagena Protocol on Biosafety or the operation of the Biosafety Clearing-House may be directed to the Secretariat of the Convention on Biological Diversity.

**Secretariat of the Convention  
on Biological Diversity**

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