

Figure S2

Illustration of searching known genes or gene products name and finding the genotype (gene) to phenotype (QTL) associations. (a) Search for “Hd1” in POC database by selecting “Annotations” and “Exact Match” give five results from rice, of which four are QTL and one gene. (b) Visit the detail annotation of any one QTL (e.g. CQAK3) for DTHD (days to heading). (c) Visit the original QTL entry in the source database (e.g. Gramene). In the Gramene QTL detail page, users can find more detail information about the associated gene often identified by fine mapping, map location of the QTL on the genetic map on which it was identified and the inferred position on the genome. The black arrow points to the sequential views a user will see while navigating from search to the annotation details. In order to find the gene to phenotype associations and detail information, the POC database encourages users to visit the source database.

(a) Annotation Search Results

5 results for Hd1 [exact match] in field(s) name(s), symbol, synonyms

Filter search results

Filter Annotation Objects

Species	Data source
All	All
A. thaliana	Gramene Genes
O. sativa	Gramene QTL
S. bicolor	MaizeGDB

Filter Annotation Objects by Associations

Evidence Code	Ontology
All Curator Approved	All
IC	Plant Growth Stage
IDA	Plant Structure
IEP	

Name	Details
<input type="checkbox"/> DTHD days to heading Query matches synonym Hd1	QTL from <i>Oryza sativa</i>
<input type="checkbox"/> DTHD days to heading Query matches synonym Hd1	QTL from <i>Oryza sativa</i>
<input type="checkbox"/> DTHD days to heading Query matches synonym Hd1	QTL from <i>Oryza sativa</i>
<input type="checkbox"/> DTHD days to heading Query matches synonym Hd1	QTL from <i>Oryza sativa</i>
<input type="checkbox"/> PH1 Flowering date-1 Query matches synonym Hd1	

(b) **DTHD**

Information

Name(s) days to heading

Type QTL

Species *Oryza sativa*

Synonyms Hd1

Database Gramene QTL, GR_QTL:CQAK3

Associated No associations to GO

Sequence No peptide sequence available

Term Annotations

Filter annotations displayed

Evidence Code	Ontology
All Curator Approved	All
IC	Plant Growth Stage
IDA	Plant Structure
IEP	

Qualifier	Term	Ontology	Evidence	Reference	Assigned by
	inflorescence emergence from flag leaf sheath [view annotations]	plant growth and development stage	IC	GR ref:11453	Gramene (via Gramene QTL)
	inflorescence [view annotations]	plant structure	IC	GR ref:11453	Gramene (via Gramene QTL)

QTL Home | Simple Search | Power Search | Help | Tutorial | FAQ

Browse by Trait Category: Abiotic stress | Anatomy | Biochemical | Biotic stress | Development | Quality | Sterility or fertility | Vigor | Yield

Find: CQAK3 In: QTL Accession ID Species: --All Species--
 E.g., development, vegetative*, VQTM, QTL*, AGE2001, Or view help

Oryza sativa QTL "CQAK3" (days to heading)

QTL Accession ID	CQAK3
Species	<i>Oryza sativa</i> (Rice) [GR_tax:013681]
Trait Symbol	DTHD
Trait Name	days to heading
Published Symbol	Hd1
Trait Synonym(s)	DH HDD heading date
Trait Category	Development
Chromosome	6
Comments	Detected in a cross between NIL(Hd1)/NIL(Hd3) by the method of interval mapping and one-way ANOVA.

Map Positions (2)

QTL (1)

Species	Map Set	Name	Map	Start	Stop	Ext. Links
<i>Oryza sativa</i> (Rice)	JRGP Nip/Kas F2 QTL 2000	DTHD	6	54.1 cM	54.1 cM	View Comparative Map

Sequence (1)

Species	Map Set	Name	Map	Start	Stop	Ext. Links
<i>Oryza sativa</i> (Rice)	Gramene Annotated Nipponbare Sequence 2006	CQAK3-DTHD	Chr. 6	9,282,505 bp	9,327,178 bp	View in Genome Browser View Comparative Map

Associated Markers (6)

Direction	Name	Type	Species	Analysis	Assoc. Type
To	Y4836L	RFLP	<i>Oryza sativa</i>	colocalized_qtl_marker	qtl_marker
To	C235	RFLP	<i>Oryza sativa</i>	colocalized_qtl_marker	qtl_marker
To	S2539	RFLP	<i>Oryza sativa</i>	colocalized_qtl_marker	qtl_marker
To	Y2668L	RFLP	<i>Oryza sativa</i>	neighboring_qtl_marker	qtl_marker
To	NH84	RFLP	<i>Oryza sativa</i>	neighboring_qtl_marker	qtl_marker
To	Y2145L	RFLP	<i>Oryza sativa</i>	neighboring_qtl_marker	qtl_marker

Associated Genes (1)

Species	Accession	Name	Evidence Code	Reference
<i>Oryza sativa</i>	GR:0060860	Flowering date-1	IAGP	Lin-H-X, et al., 2000

Associated Ontologies (6)

Trait Ontology	Plant Structure	Plant Growth and Development Stage	Growth Stage	Environment	Species Ontology
days to heading (TO:0000137)	inflorescence (PO:0009049)	B reproductive growth (PO:0007130)	06-heading stage (GRO:0007044)	unknown environment (EO:0007403)	<i>Oryza sativa</i> (GR_tax:013681)
Evidence: IAGP	Evidence: SM	Evidence: SM	Evidence: SM	Evidence: IC	Evidence: SM
Reference: Lin-H-X, et al., 2000	Reference: Lin-H-X, et al., 2000	Reference: Lin-H-X, et al., 2000	Reference: Lin-H-X, et al., 2000	Reference: Gramene curators, 2007	Reference: Lin-H-X, et al., 2000

Database Cross-References (1)

Gramene Literature
 Lin-H-X, Yamamoto-T, Sasaki-T, Yano-M, "Characterization and detection of epistatic interactions of 3 QTLs, Hd1, Hd2, and Hd3, controlling heading date in rice using nearly isogenic lines", *Theoretical and applied genetics*. 2000, vol. 101, pp. 1021-1028

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