funRiceGenes

Comprehensive and accurate archive of functionally characterized rice genes with continuous updating

Part I

Display of information in this database as static web pages

Welcome to funRiceGenes!



A comprehensive database of functionally characterized rice genes

At the homepage of our

database, we provide the

download of the whole

dataset in tidy format.

GENE

2800+ cloned rice genes [Download↓]

FAMS

KEYS

400+ gene families [Download↓]

400+ keywords [Download↓]

4800+ literatures [Download]

NEWS

200+ interaction networks [Download]

DOCS

Contact: ywhzau at gmail.com

CITE

To interactively query this database, go to the following site!

funRiceGenes A comprehensive database of functionally characterized rice genes

Gene GeneFamily Keyword Publication IDConversion Submit

http://funricegenes.ncpgr.cn/

https://funricegenes.github.io/

Gene HOME ZOS8-11 ZΝ GENE ZIP4,SPO22 FAMS ZFP252,RZF71 ZFP245 * KEYS ZFP185 NEWS ZFP182,ZOS3-21 DOCS ZFP179 ZFP177 CITE

The GENE menu lists 2800+ cloned rice genes.

ZFP15

The detailed information of a gene is shown as a single page.

https://funricegenes.github.io/

ZFP179

2015-01-20 | Categories genes | Tags salt stress ABA seedling salt tolerance salt oxidative

Information

- Symbol: ZFP179
- MSU: LOC Os01g62190
- RAPdb: Os01g0839100

Publication

- Link to RAPdb Functional analysis of a novel Cys2/His2-type zinc finger protein
- involved in salt tolerance in rice, 2010, J Exp Bot. Salt-responsive ERF1 regulates reactive oxygen species-dependent

signaling during the initial response to salt stress in rice, 2013, Plant Cell.

Genbank accession number

Link to PubMed

Link to PubMed

Link to MSU

AK108227

Link to GenBank Key message

- The ZFP179 transgenic rice exhibited significantly increased tolerance to oxidative stress, the reactive oxygen species (ROS)-scavenging ability, and expression levels of a number of stress-related genes, including OsDREB2A, OsP5CS OsProT, and OsLea3 under salt stress
- Our studies suggest that ZFP179 plays a crucial role in the plant response to salt stress, and is useful in developing transgenic crops with enhanced tolerance to salt stress
- The real-time RT-PCR analysis showed that ZFP179 was highly expressed in immature spikes, and markedly induced in the seedlings by NaCl, PEG 6000, and ABA treatments
- Through microarray analysis, a salt-responsive zinc finger protein gene ZFP179 was identified and subsequently cloned from rice seedlings
- Overexpression of ZFP179 in rice increased salt tolerance and the transgenic seedlings showed hypersensitivity to exogenous ABA

Connection

OsProT~ProT, ZFP179, Functional analysis of a novel Cys2/His2-type zinc finger protein involved in salt tolerance in rice, The ZFP179 transgenic rice exhibited significantly increased tolerance to oxidative stress, the

Gene Family HOME ZTLZRT and IRT like proteins GENE ZIFL **FAMS** YUCCA YSL KEYS * XYLP **NEWS** XTH DOCS XHS **XBOS** CITE WRKY

The FAMS menu lists 400+ rice gene families.

The detailed information of a gene family is shown as a single page.

XYLP

2015-01-20 | Categories gene family Link to MSU Link to RAPdb

Information

- OsLTPL1, LOC_Os03g26820, Os03g0385400.
- OsXYLP2, LOC Os03g26800, Os03g0385100.
- OsXYLP3, LOC_Os07g30590, Os07g0489000.
- OsXYLP4, LOC_Os07g43290, Os07g0625800.
- OsXYLP5, LOC_Os03g09230, Os03g0192600.
- OsXYLP6, LOC Os03g20760, Os03g0323900.
- OsXYLP7, LOC_Os05g41030, Os05g0489200.
- OsXYLP8, LOC Os01g59870, Os01g0814100.
- OsXYLP9, LOC Os07g07790, Os07g0174400.
- OsXYLP10, LOC Os07g07860, Os07g0174900.
- OsXYLP11, LOC Os03g57990, Os03g0794000.
- OsXYLP12, LOC Os07g07870, Os07g0175000.
- OsXYLP13, LOC_Os03g57970, Os03g0793800.
- OsXYLP14, LOC Os07g07930, Os07g0175600.
- OsXYLP15, LOC Os04g38840, Os04g0462200.
- OsXYLP16, LOC Os07q09970, Os07q0198300.
- OsXYLP17, LOC Os03g58940, Os03g0804200.
- OsXYLP18, LOC Os03g07100, Os03g0167000.
- o OsXYLP19, LOC Os06g47200, Os06g0686400.
- OsXYLP20, LOC_Os03g46150, Os03g0664400.
- OsXYLP21, LOC_Os08g42040, Os08g0532800.

Publication

 Identification, characterization, and transcription analysis of xylogenlike arabinogalactan proteins in rice Oryza sativa L., 2014, BMC Plant Biol.

Link to PubMed

https://funricegenes.github.io/

Keywords

https://funricegenes.github.io/

nitrogen leaf leaf senescence transcription factor early leaf senescence HOME xylem vascular bundle seedlings acetylcholinesterase shoot gravitropism **GENE** gravitropic response stem root leaf development shoot resistance flower pollen panicle spikelet grain tiller anther sterility seedling chloroplast **FAMS** seedling death domestication development awn grains per panicle grain number grain length mitochondria sheath submergence starch temperature KEYS ATPase alkaline tolerance defense oxidative stress grain length **NEWS** alkaline stress seed drought salinity salt seed germ TGW6 tolerance potassium cold tolerance oxidative growt DOCS RDD1 stress ABA ethylene yield insect jasmonate grain yi.* defense response vegetative drought tolerance cro * PGL2,OsBUL1 CITE root development auxin cytokinin crown root elong. PGL1 lists all The KEYS menu OsSGL regarding keywords OsPPKL3 phenotype description OsPPKL2 biological process. GW7,GL7,SLG7 GS3 Each keyword links to a list of genes related to this GL3.1,qGL3-1,qGL3,OsPPKL1 keyword. DEP1, DN1, qPE9-1, OsDEP1 APG,OsPIL16

AL8, RAE2, GAD1

News

HOME	• 2017/Mar/1 fix info
GENE	2017/Mar/1 add new accessions for OsGPCR
CENTE	2017/Mar/1 add new pub.
FAMS	2017/Mar/1 fix info
KEYS	• 2017/Feb/27 fix info
NEWS	• 2017/Feb/27 fix info The NEWS menu shows the updating
INLVVS	• 2017/Feb/27 fix info information of this database.
DOCS	• 2017/Feb/27 fix info
CITE	• 2017/Feb/27 fix info
	 2017/Feb/27 add new info for gene: OsLBD3-7
	 2017/Feb/27 add new pub.
	• 2017/Feb/27 PLA3 == OsLBD3-7

Literatures

HOME

1. Cloning of a cDNA encoding an importin-alpha and down-regulation of the gene by light in rice leaves, 1998, Gene.

GENE

FAMS

2. Molecular cloning of a novel importin alpha homologue from rice, by which constitutive photomorphogenic 1 COP1 nuclear localization signal NLS-protein is preferentially nuclear imported, 2001, J Biol Chem.

KEYS

NEWS

3. Mutations of genes in synthesis of the carotenoid precursors of ABA lead to pre-harvest sprouting and photo-oxidation in rice, 2008, Plant J.

DOCS

CITE

4. A pair of orthologs of a leucine-rich repeat receptor kinase-like disease resistance gene family regulates rice response to raised temperature, 2011, BMC Plant Biol.

- 5. The ATP-binding cassette transporter OsABCG15 is required for anther development and pollen fertility in rice, 2013, J Integr Plant Biol.
- 6. ABCG15 encodes an ABC transporter protein, and is essential for post-meiotic anther and pollen exine development in rice, 2013, Plant Cell Physiol.

The DOCS menu lists all the literatures archived in this database.

Link to PubMed

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HOME

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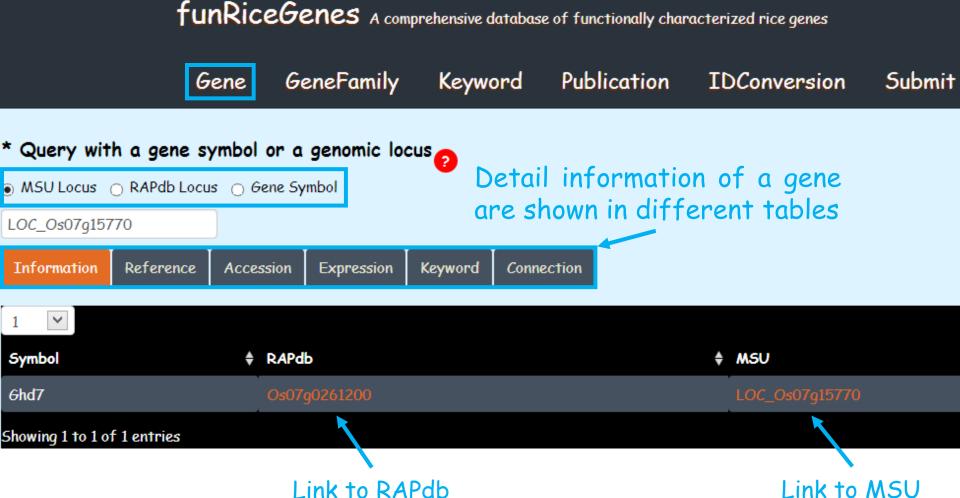
funRiceGenes A comprehensive database of functionally characterized rice genes Gene GeneFamily Keyword Publication **IDConversion** Submit http://funricegenes.ncpgr.cn/

At the homepage of our database, we provide a link to a website allowing interactive query of this database.

https://funricegenes.github.io/

Part II

Interactive query of this database



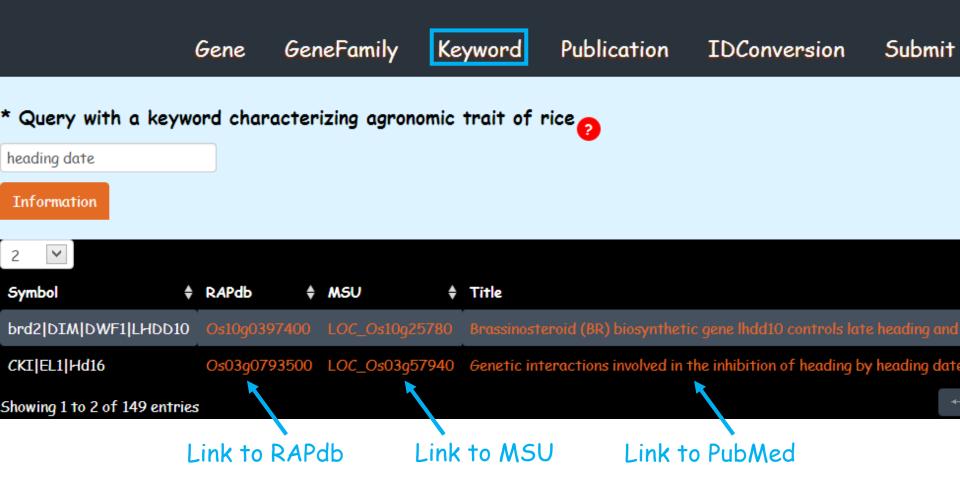
The Gene menu allows query of 2800+ genes using a MSU/RAPdb genomic locus or a gene symbol.

funRiceGenes A comprehensive database of functionally characterized rice genes GeneFamily Publication Keyword **IDConversion** Submit Gene * Query with a gene symbol or a genomic locus 👩 MSU Locus RAPdb Locus @ Gene Symbol RCN1 Detail information of a gene Reference Information are shown in different tables Symbol RAPdb MSU RCN1 Showing 1 to 1 of 1 entries

The GeneFamily menu allows query of 5000+ gene family members using a MSU/RAPdb genomic locus or a gene symbol.

Link to MSU

Link to RAPdb



The Keyword menu allows query of the database with keywords regarding phenotype description or biological process.

Publication GeneFamily Keyword **IDConversion** Gene Submit

* Query with any word concerning rice functional genomic studies 👩

heading date

The Publication menu allows query of the titles and abstracts of all publications archived in this database with any word.

Result

Journat Affiliation **Abstract** Title

Association of 2013 Proc National Key Laboratory functional Natl nucleotide for Crop Acad polymorphisms Sci U S Genetics and at DTH2 with Germplasm A the northward Enhancement, expansion of Jiangsu Plant rice Gene cultivation in Engineering Research Asia Center. Nanjing

Flowering time (i.e., heading date in crops) is an important ecological tro determines growing seasons and regional adaptability of plants to speci natural environments. Rice (Oryza sativa L.) is a short-day plant that ori in the tropics. Increasing evidence suggests that the northward expansi cultivated rice was accompanied by human selection of the heading date noninductive long-day (LD) conditions. We report here the molecular cla characterization of DTH2 (for Days to heading on chromosome 2), a min effect quantitative trait locus that promotes heading under LD condition show that DTH2 encodes a CONSTANS-like protein that promotes hea inducing the florigen genes Heading date 3a and RICE FLOWERING LO

and it acts independently of the known floral integrators Heading date

Early heading date 1. Moreover, association analysis and transgenic expe

funRiceGenes A comprehensive database of functionally characterized rice genes **IDConversion** Publication Gene GeneFamily Keyword Submit * Convert between MSU genomic locus and RAPdb genomic locus 👩 RAPdb to MSU MSU to RAPdb Os02g0677300 Result RAPdb MSU

The IDConversion menu provides a tool to convert between a MSU genomic locus and a RAPdb genomic locus.

LOC_Os02q45450

http://funricegenes.ncpgr.cn/

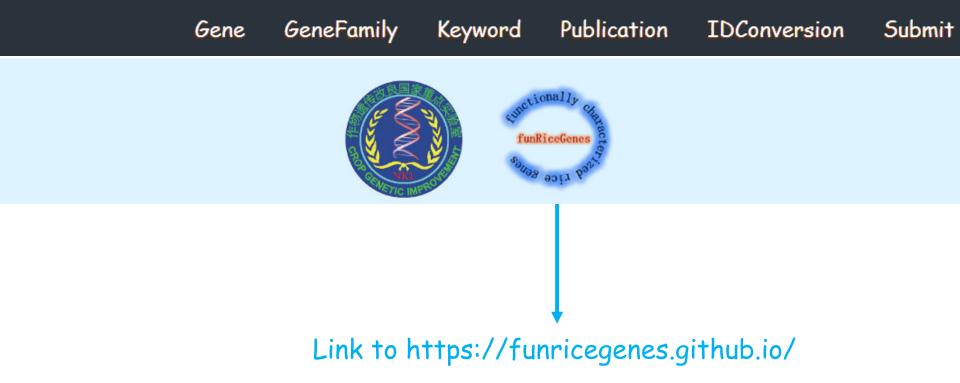
Os02q0677300

Showing 1 to 1 of 1 entries



Our database provides tools allowing submission of new information.

Currently, only our team members have permissions to submit new information.



Have a nice experience in funRiceGenes database!