

S. cerevisiae nomenclature

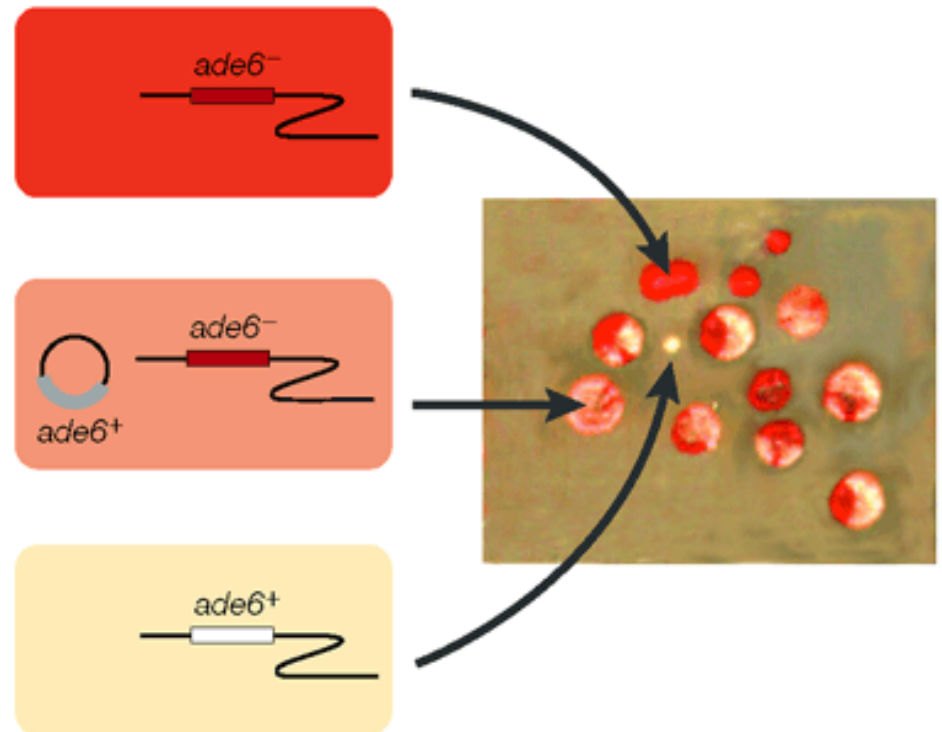
Advanced Genetics

2/4/16

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Phenotypes

- Designated by a non-italic, 3-letter abbreviation corresponding to the gene symbol (first letter is uppercase)
 - Example: "Ade" for "Adenine biosynthesis"
 - Wildtype: Ade⁺
 - Mutant: Ade⁻

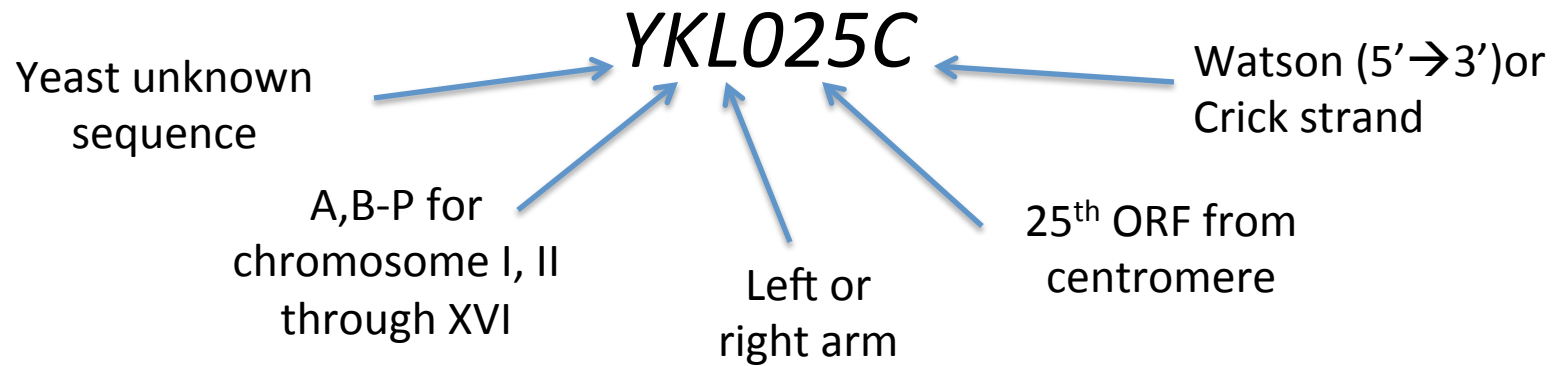


Genes

- For genes defined by mutation → gene symbol is three letters followed by a number
 - Uppercase italic for dominant gene, lowercase italic for recessive
 - Examples: *ade5*, *cdc28*, *CUP1*, *SPC105*

Genes

- Open Reading Frame designations are placeholders on the genetic map until a gene name is assigned



- Old names maintained in SGD database
 - *RPL1A* (large ribosomal subunit)

Alleles

- *act1-606*
 - ordinary alleles (gene symbol, hyphen, number)
- *ade6::URA4*
 - **Disruption** of the *ade6* gene by integration by the functional *URA4* gene
- *ade6-Δ1*
 - **Deletion** number 1 of the *ade6* gene
- *ade6Δ::URA4*
 - **Replacement** of *ade6* by the *URA4* gene
- **DOMINANT** and **recessive** alleles

Genotypes

- Mating-type loci are typically listed first
- If the cell is haploid, just one copy of each gene is listed

Example: MAT α act1-1 URA3 ADE2

- If the cell is diploid, two copies of each gene is listed, separated by a slash

*Example: MAT α /MAT α act1-1/ACT1 ura3 Δ /URA3
ADE2/ADE2*

Resources

- http://www.yeastgenome.org/sgdpub/Saccharomyces_cerevisiae.pdf
- <http://www.yeastgenome.org/help/community/nomenclature-conventions>
- The Saccharomyces Genome Database (SGD)
<http://genome-www.stanford.edu/Saccharomyces/>
- STOCK CENTRE: ATCC (American Type Culture Collection)
- Image Sources:
 - http://www.nature.com/nrg/journal/v2/n9/images/nrg0901_659a_i1.gif
 - <http://www.utm.utoronto.ca/~anders38/tet.jpg>
 - http://www.uwyo.edu/virtual_edge/lab13/images/saccharomyces_cerevisiae.jpg