

Changes to Strain Annotations in dictyBase

The dictyBase curatorial staff proposes to implement a new field for use in the annotation of strains, the **Strain Descriptor**. This new descriptor will be used for display in strain records and on the corresponding Gene Pages.

The information captured by the Strain Descriptor includes:

- official gene name
- promoter used to drive expression
- alterations to the gene sequence expressed
- molecular markers and location of the fusion (N or C terminus)

Format for Strain Descriptors

The standard format presented here is designed to avoid the use of formatted text, such as superscript, subscript, and bold face that require html tags for proper display in an internet browser.

gene-[promoter]:gene(substitution or truncation):marker

- null

/ compound mutant

[] promoter gene

() substitution and/or truncation

: fusion

[unk] designates fusion with an unknown promoter

[OE] will be used when a strain is described as an overexpressor but the promoter used is not specified

[KD] will precede a knockdown strain when the method is unknown

[AS] will precede an antisense strain

[RNAi] will precede an interference RNA strain.

Systematic Strain Names

The **Systematic Strain Name** should be used as recommended by the 1998 Nomenclature Committee. It consists of the researcher initials + a serial number. Examples are AK240, HAD172, IR110.

A unique identifier will also be assigned to each strain, the **DictyBase Strain ID** (e.g. DBS0001272). When there is no Systematic Name for a strain, the DBS ID will become the Systematic Strain Name.

Examples of Strain Descriptors

Strain Descriptor	lvsA-
Summary	lvsA null mutant

Strain Descriptor	[unk]:mybE::GFP
Summary	expression of mybE with a C-terminal fusion to GFP; promoter unknown

Strain Descriptor	aprA-/[act15]:aprA
Summary	expression of aprA from the actin 15 promoter in an aprA null background

Strain Descriptor	[act15]:myoE(1-698(S336A))
Summary	expression of a truncated myoE (residues 1-698) with a point mutation at residue 336, under control of the act15 promoter

Strain Descriptor	hbxA-/warA-
Summary	double null mutant of hbxA and warA

Strain Descriptor	[RNAi]gsr
Summary	knockdown of the gsr gene using RNAi

Strain Details Page

Below is a mockup of how the Strain Details Page will appear after the implementation of the Strain Descriptor.

Systematic Name: MS101		DBS0001272	
Strain Descriptor [act15]:GFP:krsA			
Summary		GFP fused to the krsA N-terminus expressed in wild-type; neomycin resistant	
Synonyms		GFP-krsA	
Genotype		axeA2, axeB2, axeC2, [pDGFP-krsA-Neo], neoR	
Species	Dictyostelium discoideum	Parental Strain	AX2
Strain Type	Axenic, Drug resistant	Mutagenesis Method	Random Insertion
Plasmid	pDGFP-krsA-Neo	Franke Database ID	
Original Reference	16842885	Additional References	
Associated dictyBase Genes		krsA	
This strain is not available at the Dicty Stock Center			