

Nomenclature of *D. melanogaster* genes encoding integrin subunits in FlyBase

Current nomenclature

Gene Symbol	Gene Name,	Synonym
mew	multiple edematous wings	α PS1 integrin
if	inflated	α PS2 integrin
scb	scab	α PS3 integrin
α PS4	α PS4	α PS4 integrin
α PS5	α PS5	α PS5 integrin
mys	myospheroid	β PS integrin
β Int-v	β^v integrin	β^v integrin

Issues that we would like to solve:

1. It's odd to have gene names that just have the α , with no mention of integrin.
2. The name β integrin-v is just wrong for the β^v subunit, and is different from the two α subunit names.
3. Our understanding of integrin nomenclature is that a single α or β shouldn't be referred to as an integrin, but rather an integrin subunit, since all integrins are $\alpha\beta$ heterodimers.
4. The "also known as" names for mew, if, scab, mys are buried down at the bottom of the page so its not easy to see that they encode integrin subunits. We should at least add some consistent names to the synonyms section.

Other factors:

5. While PS as an abbreviation for position-specific seems pointlessly historical, Nick argues that it is important to retain the PS to distinguish these subunits from vertebrate integrin subunit genes/proteins with the same number. For example α PS1 is very different to mammalian α 1, but instead is similar to α 3, α 6 & α 7
6. In devising a way to rename the three genes named as integrins (α PS4, α PS5, β^v) in the same way, it seemed most sensible to make them consistent with the human gene nomenclature (e.g. ITGA1: integrin, alpha1; ITGB1: integrin, beta1; etc).
7. As supporters of Drosophila gene names that correspond to a phenotype, we do not suggest changing *if*, *mew* or *mys*, even though it would have the benefit of making all family names consistent.

Therefore, we would like to propose the following revisions:

Gene Symbol	Gene Name	Synonyms	Common Protein name
mew	multiple edematous wings	ItgaPS1, Integrin alphaPS1 subunit	integrin α PS1 subunit
if	inflated	ItgaPS2, Integrin alphaPS2 subunit	integrin α PS2 subunit
scb	scab	ItgaPS3, Integrin alphaPS3 subunit	integrin α PS3 subunit
ItgaPS4	Integrin alphaPS4 subunit		integrin α PS4 subunit
ItgaPS5	Integrin alphaPS5 subunit		integrin α PS5 subunit
mys	myospheroid	ItgbPS, Integrin betaPS subunit	integrin β PS subunit
Itgbn	Integrin betanu subunit		integrin β^v subunit