

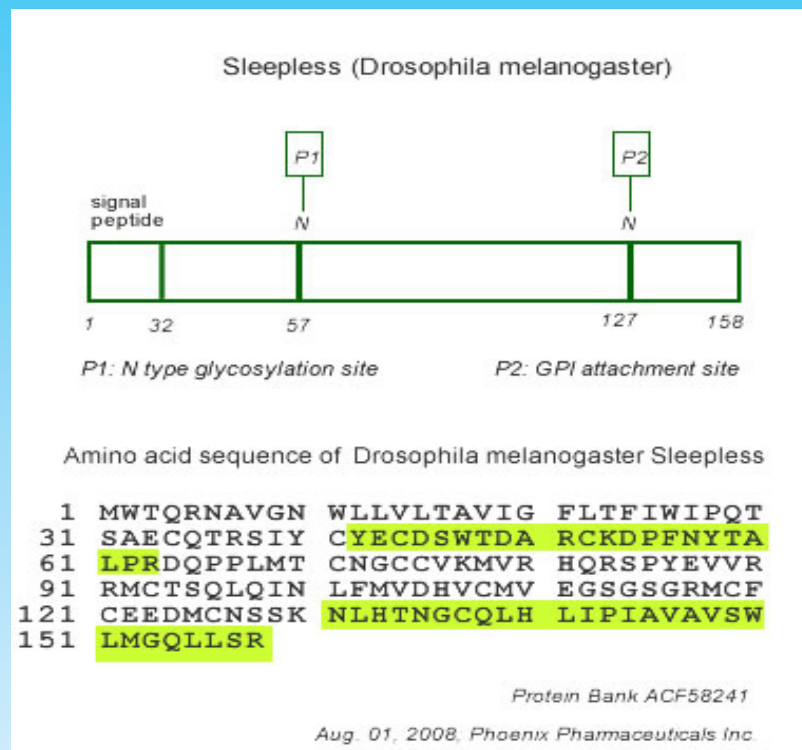
# SLEEPLESS (SSS) Protein: A sleep-promoting factor

## Identification of SLEEPLESS, a sleep-promoting factor

Sleep is an essential process conserved from flies to humans. The importance of sleep is underscored by its tight homeostatic control. Through a forward genetic screen, we identified a gene, *sleepless*, required for sleep in *Drosophila*. The *sleepless* gene encodes a brain-enriched, glycosylphosphatidylinositol-anchored protein. Loss of SLEEPLESS protein caused an extreme (>80%) reduction in sleep; a moderate reduction in SLEEPLESS had minimal effects on baseline sleep but markedly reduced the amount of recovery sleep after sleep deprivation. Genetic and molecular analyses revealed that *quiver*, a mutation that impairs Shaker-dependent potassium current, is an allele of *sleepless*. Consistent with this finding, Shaker protein levels were reduced in *sleepless* mutants. We propose that SLEEPLESS is a signaling molecule that connects sleep drive to lowered membrane excitability.

*Koh et al. Science, 2008 Jul 18;321(5887):372-6.*

## Prohormone Schematic and Amino acid sequence of Sleepless (*Drosophila melanogaster*)



Catalog Number	Name	Standard Size
019-51	Sleepless (SSS) (131-158)	100 µg
019-52	Sleepless (SSS) (42-63)	100 µg



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