

# Quick Introduction to the Systems Biology Graphical Notation (SBGN) Format

COMBINE  
10/16/2018

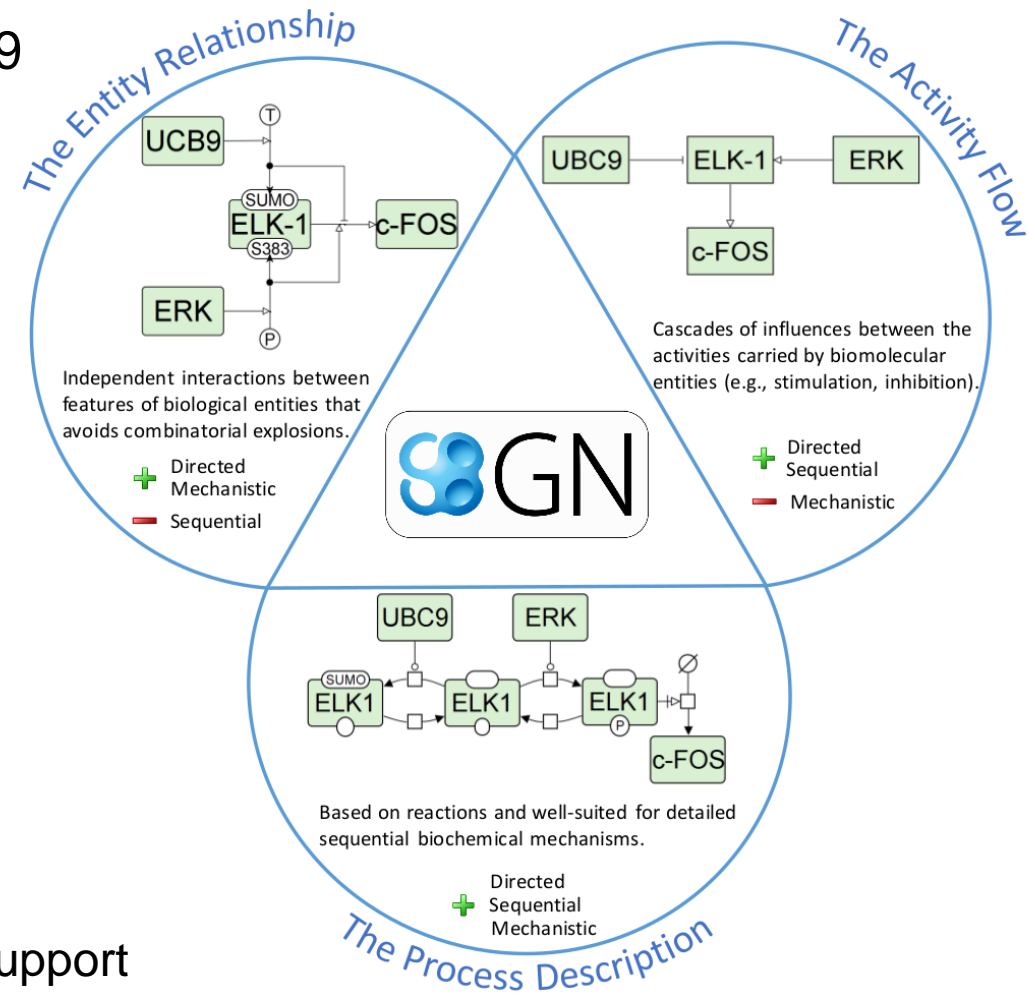
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**DANA-FARBER**  
CANCER INSTITUTE

# Systems Biology Graphical Notation (SBGN)

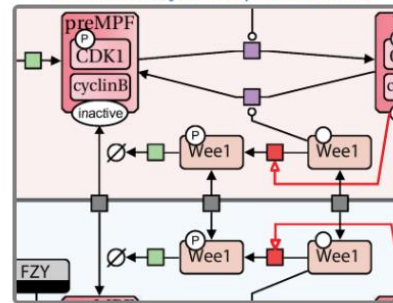
- Original SBGN Publication: 2009
- 3 complementary languages:
  - Entity Relationship
  - Activity Flow
  - Process Description
- Human-readable (SBGN)
- Machine-readable (SBGN-ML)
- Useful links
  - Website [sbgn.github.io/sbgn](http://sbgn.github.io/sbgn)
  - Development: [github.com/sbgn](https://github.com/sbgn)
  - Contact: [sbgn-discuss@googlegroups.com](mailto:sbgn-discuss@googlegroups.com)
  - Software support: [sbgn.github.io/sbgn/software\\_support](http://sbgn.github.io/sbgn/software_support)



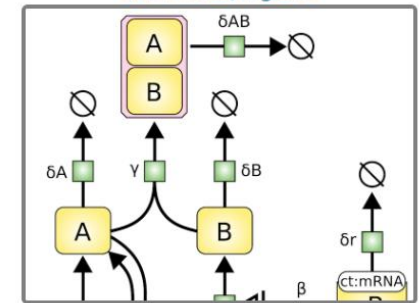
# Latest SBGN Activities

- Website rearrangement: [sbgn.github.io/sbgn](http://sbgn.github.io/sbgn)
- Tips to create SBGN maps: [doi:10.1371/journal.pcbi.1005740](https://doi.org/10.1371/journal.pcbi.1005740)
- Converters:
  - CellDesigner  $\leftrightarrow$  SBGN-ML: [github.com/royludo/cd2sbgnml](https://github.com/royludo/cd2sbgnml)
  - yEd Graph Editor  $\leftrightarrow$  SBGN-ML: [github.com/sbgn/ySBGN](https://github.com/sbgn/ySBGN)
- SBGN discussion:
  - Extension of libSBGN: support colors & annotations?
- SBGN PD L1V2 specification: work in progress!

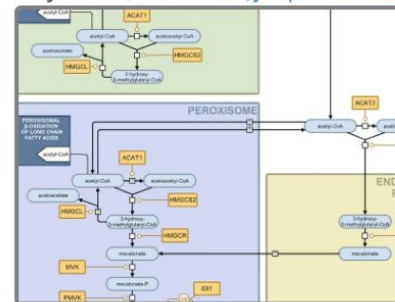
PD map of the Drosophila cell cycle, [doi:10.1371/journal.pcbi.1005740](https://doi.org/10.1371/journal.pcbi.1005740)



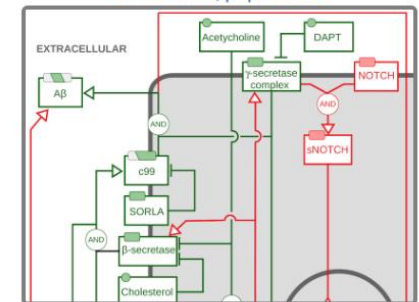
PD map of two-gene system behaviour, [doi:10.1038/nrg3885](https://doi.org/10.1038/nrg3885)



PD map of the mammalian cholesterol biosynthesis, [doi:10.1016/j.bcp.2013.03.021](https://doi.org/10.1016/j.bcp.2013.03.021)



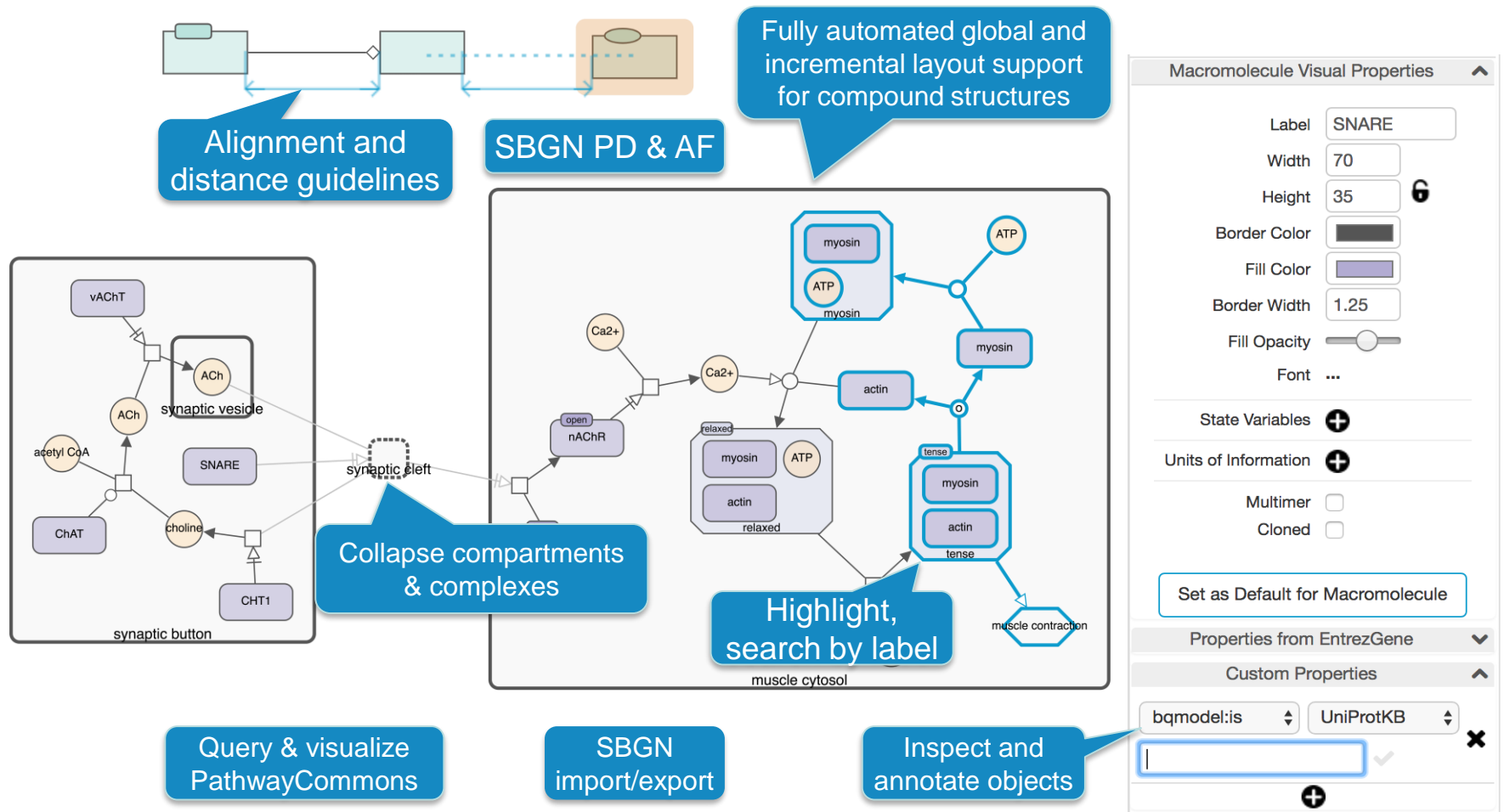
AF map of protein precursor processing, [doi:10.1002/psp4.12155](https://doi.org/10.1002/psp4.12155)



[sbgn.github.io/sbgn/published\\_maps](http://sbgn.github.io/sbgn/published_maps)

# Newt (newteditor.org) for Detailed and Simplified SBGN Diagrams

- Main work: Dogrusoz lab (Bilkent U); built on top of cytoscape.js (Bader lab)



# Acknowledgements

- Current Editors
  - Alexander Mazein
  - Ugur Dogrusoz
  - Vasundra Touré
  - Andreas Dräger
  - Adrien Rougny
- Entire COMBINE Community