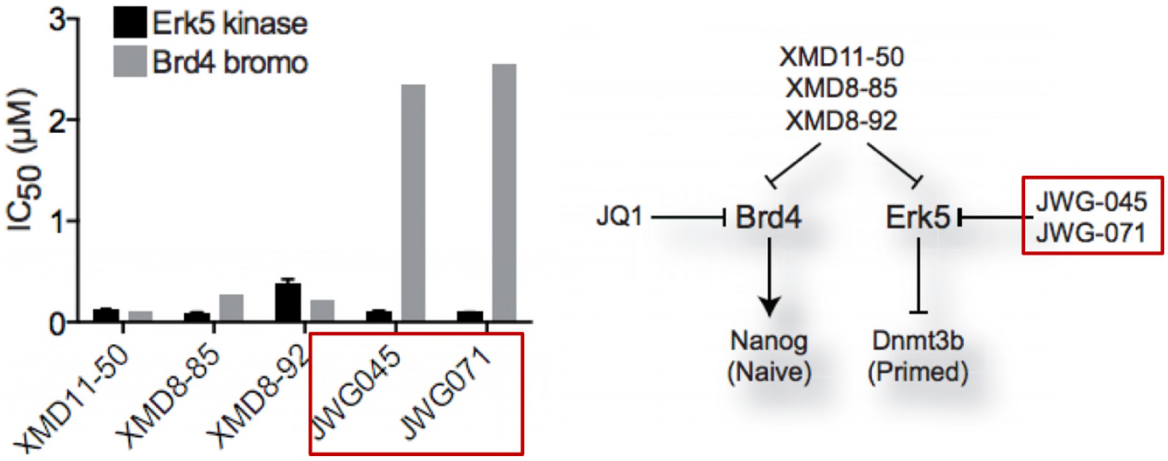
# Selective inhibitor validates ERK5 as key regulator of ESC identity

**JWG045 and JWG071 are selective Erk5 kinase inhibitors without Brd4 liability**




Williams et al. Cell Reports. 2016; 16(7):1820-1828.

- ***Type:*** small molecules (DFCI 1708, 1264)
- ***Target:*** ERK5 (also known as MAPK7 and BMK-1)
- ***Investigator:*** Nathanael Gray, PhD
- ***Development stage:*** late lead optimization, POC in *in vivo* models
- ***Patent status:*** Pyrimido-diazepinone kinase scaffold compounds and methods of treating disorders (PCT/US2010/000050); Pyrimido-diazepinone compounds and methods of treating disorders (PCT/US2014/030760); Uses of diazepane derivatives (PCT/US2015/014120).
- ***Competitive advantage:*** first class of Erk5 inhibitors had off-target effect on Brd4, and many biological effects were Brd4-dependent; JGG045 and JWG071 are newly developed Erk5 inhibitors with Erk5 selectivity.
- ***Key publication:***

Williams, C. A. C. et al. (2016). Erk5 Is a Key Regulator of Naive-Primed Transition and Embryonic Stem Cell Identity. Cell Reports, 16(7), 1820–1828.

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