

Selectively inhibiting PKM2 starves cancer cells

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Crippling a protein that allows cancer cells to grow when oxygen is scarce causes tumors to regress, according to a study published online on January 23 in the *Journal of Experimental Medicine*.

An enzyme called PKM2 (M2 isoform of pyruvate [kinase](#)) is ramped up in cancer cells, allowing them to generate energy in the harsh, low-oxygen environment found within tumors.

Michael Goldberg and Phillip Sharp at the Massachusetts Institute of Technology now find that inhibiting PKM2 kills [cancer cells](#) by starving them of energy but leaves normal cells unscathed. Crippling PKM2 caused established tumors in mice to melt away. If these results hold true in humans, this strategy could prove effective against a wide spectrum of cancers with minimal side effects.

More information: Goldberg, M.S., and P.A. Sharp. 2012. J. Exp. Med. [doi:10.1084/jem.20111487](https://doi.org/10.1084/jem.20111487)

Provided by Rockefeller University

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