

Scientists elucidate structure details of protein Sam68

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German scientists of the Institute of Structural Biology of Helmholtz Zentrum Muenchen and the Technische Universitaet Muenchen have succeeded in elucidating the structure of an important region of the Sam68 protein. Sam68 is a key protein for cellular signal transduction.

The renowned [Journal of Biological Chemistry](#) has selected the report of these research findings as one of two "papers of the week" for its September 10, 2010 issue and has chosen the structural model as cover image.

Using NMR spectroscopy, Professor Michael Sattler and his team elucidated the spatial structure of the Qua1 region of Sam68, which is responsible for the dimerization of the protein. In collaboration with the research group of Professor Ruth Brack-Werner of the Institute of Virology, the authors showed that this region is essential for the biological function of Sam68. The image reveals an unusual spatial structure, in which two helices of respectively one Qua1 region (green and blue) interact with each other and mediate the dimerization of Qua1 and thus of Sam68.

Sam68 belongs to the family of STAR proteins which carry out important tasks in the signal-regulated processing of [genetic information](#) and its translation into protein. Among others, Sam68 regulates specific processes linked to the cell cycle and apoptosis and plays a key role in the [pathogenesis](#) of cancer.

Provided by Helmholtz Zentrum Munchen

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