

## Study of *Saccharomyces cerevisiae* IQ motifs of Iqg1p and its interaction with Mlc1p

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**Abstract:** IQGAP related proteins are found in a number of organisms including human and yeast. Iqg1p is a cytoskeletal scaffolding protein found in *Saccharomyces cerevisiae*. It has critical role in cell division and disruption of the protein which results in growth defects. The IQ motif of Iqg1p has been reported to bind to EF hand proteins such as Mlc1p *in vivo* to co-ordinate various cellular events. It has not yet been known which of the IQ motif binds to the Mlc1p *in vivo* / *in vitro*. This computational approach identifies for the first time that the seventh and ninth IQ motifs have high probability for binding with Mlc1p followed by the eighth IQ motif. However the first IQ motif has less probability for binding with Mlc1p. Further, it is noted that this work is supported by the *in vivo* work of Terrak *et al.* (2003). The observation raises a possibility that EF hand target sequences are larger than previously reported consensus sequences.

**Keywords:** IQ motifs, EF hand protein, Cytoskeletal scaffolding protein