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[\[PDF \(2830K\)\]](#) [\[References\]](#)**Involvement of Exoc3l, a protein structurally related to the exocyst subunit Sec6, in insulin secretion**Tetsuya SAITO¹⁾, Tadao SHIBASAKI¹⁾ and Susumu SEINO¹⁾

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ABSTRACT

The exocyst is an octameric complex involved in docking or tethering of secretory vesicles to fusion sites of the plasma membrane. Sec6 is the core subunit of the exocyst complex. Here we identify an isoform of Sec6, deposited as Exocyst complex component 3-like (Exoc3l) in the database, by *in silico* screening using rat Sec6 as a probe. The amino acid sequence of Exoc3l has 31% identity and 53% similarity with that of Sec6. RT-PCR analysis reveals that Exoc3l is expressed in insulin-secreting MIN6 cells as well as in various tissues including pancreatic islets and brain. In co-immunoprecipitation experiments, Exoc3l was found to interact with Sec5, Sec8, and Sec10, all of which are binding partners of Sec6 in the exocyst complex. Furthermore, overexpression of a deletion mutant of Exoc3l in MIN6 cells suppressed glucose-stimulated secretion. These results suggest that Exoc3l is involved in regulated exocytosis of insulin granules.

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