Preliminary X-ray crystallographic studies of GLUE domain of mammalian Eap45

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Mammalian Eap45 is a component of ESCRT-II (endosomal sorting complex required for transport-II) involved in the multivesicular body (MVB) protein sorting pathway. It contains a novel ubiquitin-binding domain, designated GRAM-like ubiquitin-binding in Eap45 (GLUE) domain, as it shares similarities in its primary and predicted secondary structures with phosphoinositide-binding GRAM domains. In a recent study, it has been shown that Eap45 also binds phosphoinositides, hence, indicating the interrelationship between ubiquitin recognition and phosphoinositide binding. In order to investigate the interactions among Eap45, ubiquitin and phosphoinositides, and thereby to better understand the molecular basis for the functions of Eap45, we performed overexpression, purification, crystallization and preliminary X-ray diffraction experiments of mammalian Eap45-GLUE domain.