Tal, a Tsg101-specific E3 ubiquitin ligase, regulates receptor endocytosis and retrovirus budding

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Abstract:

The tumor suppressor gene 101 (tsg101) regulates vesicular trafficking processes in yeast and mammals. We report a novel protein, Tal (Tsg101-associated ligase), whose RING finger is necessary for multiple monoubiquitylation of Tsg101. Bivalent binding of Tsg101 to a tandem tetrapeptide motif (PTAP) and to a central region of Tal is essential for Tal-mediated ubiquitylation of Tsg101. By studying endocytosis of the epidermal growth factor receptor and egress of the human immunodeficiency virus, we conclude that Tal regulates a Tsg101-associated complex responsible for the sorting of cargo into cytoplasm-containing vesicles that bud at the multivesicular body and at the plasma membrane.

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