UBE2Q2 [6His-tagged]
E2 – Ubiquitin Conjugating Enzyme

Alternate Names: DKFZp762C143, EC 6.3.2.19, Ubiquitin carrier protein Q2, Ubiquitin-protein ligase Q2

The enzymes of the ubiquitylation pathway play a pivotal role in a number of cellular processes including the regulated and targeted proteosomal degradation of substrate proteins. Three classes of enzymes are involved in the process of ubiquitylation; activating enzymes (E1s), conjugating enzymes (E2s) and protein ligases (E3s). UBE2Q2 is a member of the E2 conjugating enzyme family. The cloning of human UBE2Q2 was first described by Crawford and Piwnica-Worms. (2001). UBE2Q2 has been found to be up-regulated in 85% of head and neck squamous cell carcinoma tumors, with an increase of 2.4-fold compared to normal tissue. Immunohistochemistry and in situ hybridization analysis on tumor tissue sections has revealed strong signals in the tumour cell islets, invasive epithelia, and dysplastic regions (Seghatoleslam et al., 2006). UBE2Q2 has been identified as a novel oncosuppressor that inhibits tumor growth and it is thought it could function as a novel diagnostic tool and potential therapeutic target for head and neck squamous cell carcinoma (Maeda et al., 2009). UBE2Q2 may play a role in cytoskeleton structure and regulation, as actin and 6 actin-binding proteins have been shown to interact with UBE2Q2 (Seghatoleslam et al., 2006). Inhibition of UBE2Q2 following treatment of HeLa cells with Microtu-

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Background

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Bule inhibiting agent (MIA) causes mitotic arrest and increased cytotoxicity, effects only observed in the absence of MIA suggesting UBE2Q2 is only involved in this response rather than having a more general role in mitosis (Banerjee et al., 2007).

References:


