ClariCELL® DCLK2 Kinase Assay Service

Description

The ClariCELL DCLK2 Kinase Assay quantifies autophosphorylation of human full-length DCLK2 in human cells. The assay is useful to determine potencies of small-molecule inhibitors against the specified kinase in the context of a cellular environment. Compound testing services are available utilizing the assay.

Overview

Human Embryonic Kidney (HEK 293) cells transiently expressing sequence verified human full-length DCLK2 are exposed to test compound or control, then lysed to release cellular proteins. DCLK2 is captured onto an assay plate, and the extent of autophosphorylation is quantified by ELISA using an antibody specific for the phosphorylation event. Cells expressing kinase deficient DCLK2 [K440M] are also utilized as controls to calculate the % inhibition of test compounds.

Assay Validation

DCLK2 Expression in Cells

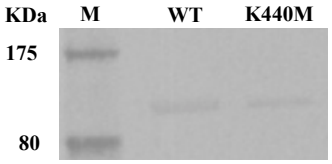

Figure 1: Wild type (wt) or kinase dead (K440M) DCLK2 was expressed transiently in 293 cells. Following cell lysis, an IP Western was performed with appropriate antibodies to capture and detect total DCLK2 protein.

DCLK2 Autophosphorylation in Cells

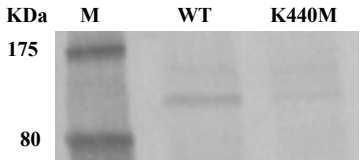

Figure 2: Wild type (wt) or kinase dead (K440M) DCLK2 was expressed transiently in 293 cells. Following cell lysis, an IP Western was performed with appropriate antibodies to capture and detect phospho-DCLK2 protein.

Quantification of Phosphorylation

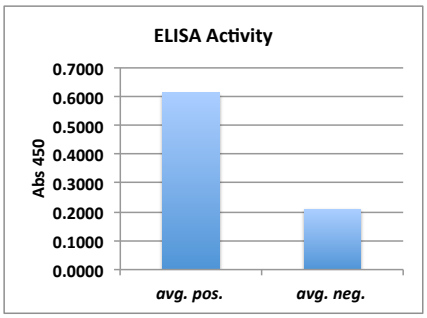

Figure 3: Wild type (wt) or kinase dead (K440M) DCLK2 was expressed transiently in 293 cells. Following cell lysis, an ELISA was performed to quantify the extent of auto-phosphorylation of DCLK2.

Reference Inhibitor Data

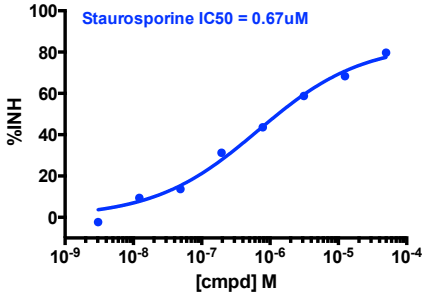

Figure 4: An autophosphorylation assay was performed in the presence of staurosporine, a DCLK2 inhibitor. Percent inhibition data were plotted to determine the IC50.