

AlphaScreen® SureFire® total-Akt 1/2/3 Kit

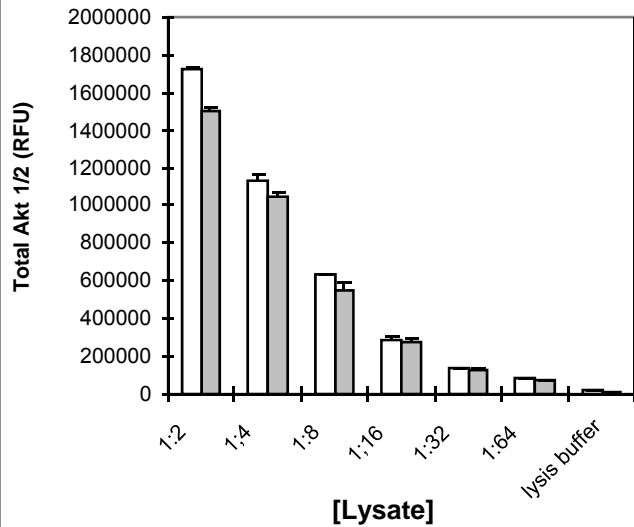
TGRTAPS500TK

TGRTAPS500

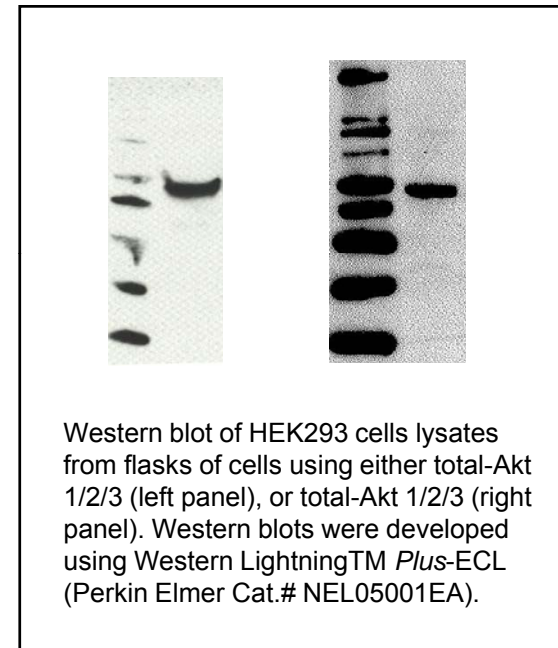
TGRTAPS10K

TGRTAPS50K

Akt (also known as PKB) plays a central role in cell survival and inhibiting apoptosis, by phosphorylating and inactivating several targets. Akt is activated by insulin and various growth factors, which promotes phospholipid binding and transport to the plasma membrane, where the activation loop is phosphorylated at Thr308 by PDK1. The carboxy terminus is phosphorylated at Ser473 by mammalian target of rapamycin complex 2 (TORC2). Akt substrates include Bad, forkhead transcription factors, and caspase-9. Another vital Akt function is the regulation of glycogen synthesis through phosphorylation of GSK-3 α and β . Akt phosphorylation also prevents GSK-3 β mediated phosphorylation and degradation of cyclin D1, and negatively regulates the cyclin dependent kinase inhibitors p27 Kip and p21 Waf1/CIP1. Akt also plays a critical role in the regulation of TORC1 and tuberlin (TSC2).



HEK293 cells lysates were prepared from confluent flasks of either untreated (pos) or treated for 2 hours with 2 μ M wortmannin (neg). A series of both pos and neg lysates were diluted to various concentrations and examined for Akt 1/2 using the standard AlphaScreen SureFire protocol.



Western blot of HEK293 cells lysates from flasks of cells using either total-Akt 1/2/3 (left panel), or total-Akt 1/2/3 (right panel). Western blots were developed using Western Lightning™ Plus-ECL (Perkin Elmer Cat.# NEL05001EA).