

Biology and Disease

The serine-threonine protein kinase AKT family is the primary downstream mediator of the phosphatidylinositol-3-kinase (PI3K) signaling pathway. Members of the family (AKT1, AKT2, and AKT3) require two separate kinases for complete activation. AKT1 phosphorylates mTOR, whose downstream targets include other kinases, cell cycle regulators, and transcription factors that are essential for many cell proliferation and survival processes. AKT1 also up-regulates matrix metalloproteinases and is thus implicated in tumor progression. AKT1 and other members of the AKT family have been an important focus in therapeutic development with their broad effects on the PI3K pathway.

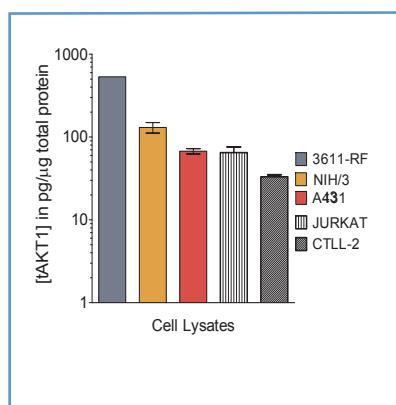
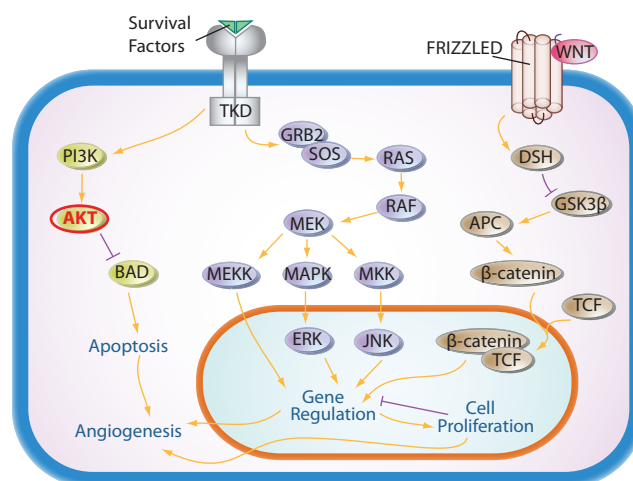


FIGURE 1: Mean endogenous [tAKT1] measured in human, rat and mouse tissue Lysates

The Erenna® total-AKT1 Immunoassay Kit is able to quantify [tAKT1] elevations in cell lysates demonstrating the sensitivity needed to accurately quantify endogenous tAKT1 in human, rat and mouse tissue lysates.

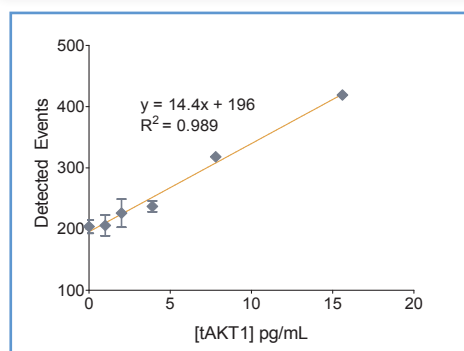


FIGURE 2: Erenna® tAKT1 Immunoassay Kit low-end standard curve signal

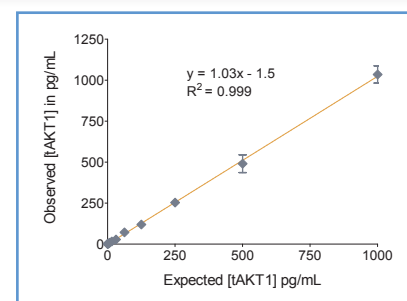


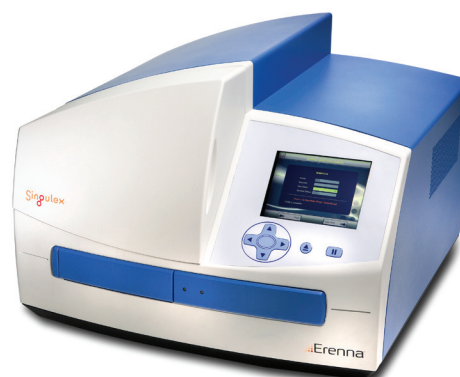
FIGURE 3: Erenna® tAKT1 Immunoassay Kit full length correlation curve

TABLE 1: Analytical sensitivity of the Erenna® tAKT1 Immunoassay Evaluation Reagent Kit¹

Lower Limit of Detection	2.5 pg/mL
Lower Limit of Quantification ²	7.8 pg/mL
Upper Limit of Quantification	1000 pg/mL
Low-end CV% Average	10%
Low-end CV% Range	2-15%
Recommended Sample Volume	100 μL

¹ see product insert for updated values

² LLoQ ≤ 20% CV and ± 20% recovery



Representative data shown for demonstration purposes only. Individual results may vary depending upon samples tested and protocol used.