Akt2 (D6G4)

VENDOR: Cell Signaling Technology

Cat #: 3063

SIMPLE WESTERN CERTIFIED ANTIBODY DATASHEET

View Antibody Link

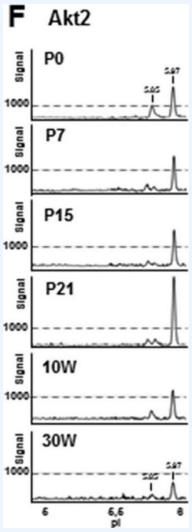

Figure 1: Analysis of PI3K signaling strength during rat brain development.A, Western blot analysis of rat brain lysates obtained at different postnatal and adult stages (P0 to 30 weeks) using antibodies against structural and signaling proteins related to neuronal development, including components of the PI3K/PTEN and ERK signaling pathways. B–G, the same lysates were analyzed by cIEF using pan-Akt (B), Ser(P)473-Akt (C), or Thr(P)308-Akt (D) or the isoform-specific antibodies recognizing Akt1 (E), Akt2 (F), or Akt3 (G). The most prominent changes in Akt peak distribution during brain development and maturation occur in the Akt1 isoform.

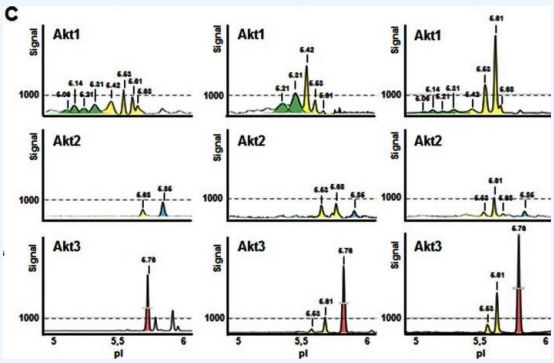

Figure 2: Akt cIEF assay development and peak identification.A, Western blot analysis of Akt isoforms (Akt1–3) in cell lysates obtained from N1E-115 neuroblastoma cells, primary cortical neurons (21DIV), and embryonic day 16.5 (E16.5) mouse brain. B, cIEF analysis of the cell lysates using a pan-Akt antibody shows a regular Akt profile with 9 or 10 conspicuous peaks that are separated according to protein charge distribution. C, cIEF analysis of cell lysates using isoform-specific Akt antibodies. In cIEF profiles, Akt1 peaks are colored in green, Akt2 peaks are in blue, and Akt3 peaks are in red. Peaks with mixed Akt isoforms are colored in yellow.

PROTEIN TARGET/ANTIBODY	
Protein Target	Akt2 (D6G4)
Protein Isoform	Unmodified
Antibody Type	Primary
Host Species/Clonality	Rabbit Monoclonal
ASSAY	
Sample Type	N1E-115, Brain
Sample Concentration	Not_Stated
Antibody Concentration/Dilution	Not_Stated
Antibody Diluent	
Detection Mode	Chemiluminescence
Separation Type	Charge
Matrix	pH 5-8
Observed kDa	5.63, 5.86

PUBLICATIONS

1. Iacovides, D. C., Johnson, A. B., et al. Identification and quantification of AKT isoforms and phosphoforms in breast cancer using a novel nanofluidic immunoassay. Mol Cell Proteomics. 2013 Nov;12(11):3210-20. 10.1074/MCP.M112.023119. PMID:23929892.
2. Schrötter, S., Leondaritis, G., et al. Capillary Isoelectric Focusing of Akt Isoforms Identifies Highly Dynamic Phosphorylation in Neuronal Cells and Brain Tissue. J Biol Chem. 2016 May 6;291(19):10239-51. 10.1074/JBC.M115.700138. PMID:26945062.
3. Urasaki, Y., Beaumont, C., et al. Akt3 Regulates the Tissue-Specific Response to Copaiba Essential Oil. Int J Mol Sci. 2020 Apr 19;21(8):NULL. 10.3390/IJMS21082851. PMID:32325885.
4. Ramos, P. A., Lytle, K. A., et al. Insulin-Stimulated Muscle Glucose Uptake and Insulin Signaling in Lean and Obese Humans. J Clin Endocrinol Metab. 2021 Mar 25;106(4):e1631-e1646. 10.1210/CLINEM/DGAA919. PMID:33382888.

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