



## Akt Rabbit Polyclonal Antibody

### Catalog #: EAB10006

Host/Isotype	Clonality	Applications	MW (kDa)	Reactivity
Rabbit IgG	Polyclonal	WB, IHC-P, IF/ICC, ELISA	56	Human, Mouse, Rat

### Applications Dilutions

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<b>WB</b> (Western Blotting)	1:500-2000
<b>IHC-P</b> (Immunohistochemistry-Paraffin)	1:50-300
<b>IF/ICC</b> (Immunofluorescence/Immunocytochemistry)	1:50-300
<b>ELISA</b> (Enzyme-linked Immunosorbent Assay)	1:5000-20000

### Product Information

<b>Conjugate</b>	Unconjugate
<b>Specificity</b>	Akt Rabbit Polyclonal Antibody detects endogenous levels of Akt protein.
<b>Purification</b>	Affinity purification
<b>Concentration</b>	1mg/ml
<b>Format</b>	Liquid
<b>Formulation</b>	In PBS, pH 7.4, Containing 0.02% sodium azide, 0.5% BSA and 50% Glycerol.
<b>Shipping</b>	Gel Pack
<b>Storage</b>	Store at -20°C least 1 year from the date of shipment. Avoid repeated freeze/thaw cycles. Aliquots may be stored at +4°C for 1-2 weeks.
<b>UniProt ID</b>	<a href="#">P31749</a> , <a href="#">P31751</a> , <a href="#">Q9Y243</a>
<b>Entrez-Gene ID</b>	<a href="#">207</a> , <a href="#">208</a> , <a href="#">10000</a>

### Product Description

The Akt family, comprising Akt1, Akt2, and Akt3, also referred to as protein kinase B isoforms, plays a pivotal role in regulating critical cellular processes, including growth, metabolism, and survival. Akt1, the most extensively studied isoform, is central to anti-apoptotic signaling, translocating from the cytoplasm to the plasma membrane upon activation by upstream kinases such as PI3K and PDK1. This membrane localization allows phosphorylation at Thr308 and Ser473, modifications necessary for full activation and interaction with downstream targets like glycogen synthase kinase-3 beta (GSK-3 $\beta$ ) and mammalian target of rapamycin (mTOR). These interactions influence diverse cellular responses, including glucose uptake, protein synthesis, and cell cycle progression. Akt2, predominantly expressed in insulin-responsive tissues, regulates glucose metabolism, while Akt3 is implicated in brain development and function. The precise regulation of these isoforms through phosphorylation and localization underscores their importance in maintaining cellular homeostasis. Dysregulation of Akt signaling is associated with various diseases, including cancer, diabetes, and neurodegenerative disorders.

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