



ABCLONAL BIOTECHNOLOGY, INC.

p35/25 Rabbit pab Antibody

Anti p35/25 antibody

Catalog Number:	A0197	Quantity:	100ul
Lot Number:	A00009	Species:	Rabbit
Gene ID:	8851	Swiss Prot:	Q15078

DESCRIPTION

Description	Rabbit polyclonal to Human p35/25
Species	Rabbit
Applications	WB IHC
Reactivity	Human
Immunogen	A synthetic peptide of human p35/25
Other Name	CDK5R1;CDK5P35;CDK5R;MGC33831;NCK5A;p23;p25;p35;p35nck5a ;

PROPERTIES

Form	Liquid
Storage instructions	Upon delivery aliquot and store at -20°C or -80°C.
Storage buffer	PBS with 0.1% Sodium Azide, 50% Glycerol,
Purity	Affinity purification
Clonality	Polyclonal
Isotype	IgG

APPLICATION

WB	WB :1/100-500
IHC	IHC: 1/10-50



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BACKGROUND

Cyclin-dependent kinases (CDKs) are serine/threonine kinases that are activated by cyclins and govern eukaryotic cell cycle progression. While CDK5 shares high sequence homology with its family members, it is thought mainly to function in postmitotic neurons, regulating the cytoarchitecture of these cells. Analogous to cyclins, p35 and p39 associate with and activate CDK5 despite the lack of sequence homology. CDK5 is ubiquitously expressed, but high levels of kinase activity are detected primarily in the nervous system due to the narrow expression pattern of p35 and p39 in post-mitotic neurons. A large number of CDK5 substrates have been identified although no discrete substrates have been attributed as a function of p35 vs. p39. Amongst many, substrates of CDK5 include p35 and p39. p35 is rapidly degraded ($T_{1/2} < 20$ min) by the ubiquitin-proteasome pathway (1). However, p35 stability increases as CDK5 kinase activity decreases, and this is likely a result of decreased phosphorylation of p35 at Thr138 by CDK5 (2). NGF activates Erk and EGR1, and induces p35 expression in PC12 cells (3). Proteolytic cleavage of p35 by calpain produces p25 upon neurotoxic insult, resulting in prolonged activation of CDK5 by p25. Accumulation of p25 is found in neurodegenerative diseases such as Alzheimer's disease and Amyotrophic Lateral Sclerosis (ALS) (4-5).

1. [Dhavan, R. and Tsai, L.H. \(2001\) *Nat. Rev. Mol. Cell Biol.* 2, 749-759.](#)
2. [Patrick, G.N. et al. \(1998\) *J. Biol. Chem.* 273, 24057-24064.](#)
3. [Harada, T. et al. \(2001\) *Nat. Cell Biol.* 3, 453-459.](#)
4. [Lee, M.S. et al. \(2000\) *Nature* 405, 360-364.](#)
5. [Kusakawa, G. et al. \(2000\) *J. Biol. Chem.* 275, 17166-17172.](#)