

## DESCRIPTION

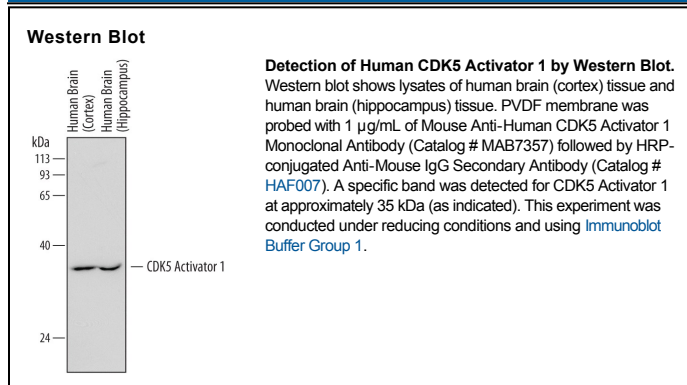
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human CDK5 Activator 1 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human CDK5 Activator 2 is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 739304
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human CDK5 Activator 1 Ser8-Phe98 Accession # Q15078
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
<b>Western Blot</b>	1 µg/mL	See Below

## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.5 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Cyclin dependent kinase 5 regulatory subunit 1 (CDK5R1) is a 35 kDa protein that associates with and activates CDK5. Its expression is restricted to neurons and is required for normal brain development. CDK5R1 can be cleaved by calpain at Phe98-Ala99 which liberates a C-terminal fragment known as p25. p25 induces prolonged activation of CDK5 and broadens the substrate specificity of CDK5 to include tau which is aberrantly phosphorylated in Alzheimer's disease. Full length CDK5R1 is myristoylated at Gly2 and is preferentially localized to membranes at the cell periphery. p25 lacks this modification and is enriched in the nucleus and perinuclear regions. p25 accumulates in the brains of Alzheimer's patients where it promotes neuronal apoptosis and cytoskeletal abnormalities. Within aa 100-307, human CDK5R1 shares 99% aa sequence identity with mouse and rat CDK5R1.