

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CDK5 Activator 1 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human CDK5 Activator 2 is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 739304
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human CDK5 Activator 1 Ser8-Phe98 Accession # Q15078
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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.

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