Human/Mouse/Rat Casein Kinase 2β Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF4380

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse and rat Casein Kinase 2β in Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human Casein Kinase 2β Met1-His153 Accession # P67870
Formulation	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.

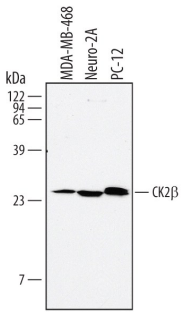
APPLICATIONS

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
Western Blot	1 µg/mL	See Below
Immunocytochemistry	5-15 µg/mL	See Below

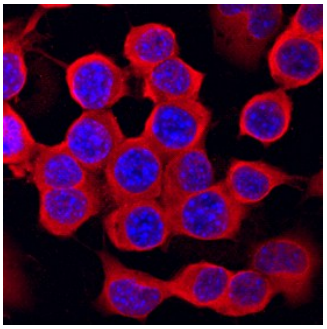
DATA

Western Blot



Detection of Human, Mouse, and Rat Casein Kinase 2β/CK2β by Western Blot. Western blot shows lysates of MDA-MB-468 human breast cancer cell line, Neuro-2A mouse neuroblastoma cell line, and PC-12 rat adrenal pheochromocytoma cell line. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human/Mouse/Rat Casein Kinase 2β/CK2β Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4380) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Casein Kinase 2β/CK2β at approximately 25 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 5.

Immunocytochemistry



Casein Kinase 2β in Neuro-2A Mouse Cell Line. Casein Kinase 2β was detected in immersion fixed Neuro-2A mouse neuroblastoma cell line using Sheep Anti-Human/Mouse/Rat Casein Kinase 2β Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4380) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	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
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Casein kinase 2 (CK2) is a ubiquitous, tetrameric serine/threonine kinase comprised of two catalytic subunits (CK2α and/or CK2α') and two identical regulatory subunits (CK2β). CK2 has been implicated in numerous cellular processes, including signal transduction, transcription, translation, replication, and metabolic pathways. CK2β undergoes phosphorylation at Ser-2, Ser-3 and Ser-209. CK2β also plays dual roles in the regulation of CK2 acivity. The C-terminal domain is responsible for stable interactions with the catalytic subunit and increased catalytic activity following tetramer formation, while the N-terminal domain exerts negative regulation on the catalytic activity of CK2. CK2 is known to phosphorylate more than 300 different substrates. Phosphorylation of cell-cycle proteins such as p53, $p34^{cdc2}$, $p27^{KIP1}$, and MDM-2 account for the ability of CK2 to induce proliferation, while the phosphorylation of HS1, Bid, and Max account for its antiapoptotic role.

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