



Qty: 100 µg/400 µL

Rabbit anti-Casein kinase 1 epsilon

Catalog No. 487600

Lot No.

Rabbit anti-Casein kinase 1 epsilon

FORM

This polyclonal antibody is supplied as a 400 µL aliquot at a concentration of 0.25 mg/mL in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. This antibody is epitope-affinity purified from rabbit antiserum.

PAD: ZMD.691

IMMUNOGEN

Synthetic peptide derived from the N-terminal region of the human casein kinase 1 epsilon protein (Accession# NP_689407), which is identical to mouse and rat sequences.

SPECIFICITY

This antibody is specific for the casein kinase 1 epsilon (CKI-epsilon, CKIε, KC1E, CSNK1E) protein. On Western blots, it identifies the target band at ~47 kDa.

REACTIVITY

Reactivity has been confirmed with HEK 293T cell lysates transfected with human casein kinase 1 epsilon cDNA (Invitrogen Ultimate™ ORF Clone, Cat# IOH59150), NIH3T3 and mouse brain, rat brain homogenates.

Sample	Western Blotting	Immuno-precipitation	Immuno-cytochemistry
Human	+++	0	ND
Mouse	+++	0	ND
Rat	+++	0	ND

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than that listed below has not been determined. The following concentration range is the recommended starting point for this product.

Western Blotting: 1-3 µg/mL

STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

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PI487600

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BACKGROUND

Casein kinase 1 epsilon is a member of the serine/threonine protein kinases.¹ It plays important roles in many signaling pathways. Casein kinase 1 epsilon is a positive regulator of the canonical Wnt pathway. It stimulates Dvl activity in the Wnt pathway, but dramatically inhibits Dvl activity in the JNK pathway.² Casein kinase 1 epsilon-dependent phosphorylation of Dvl enhances the formation of a complex of Dvl-1 with Frat-1 and this complex leads to the activation of the Wnt signaling pathway.³ Casein kinase 1 epsilon itself can be regulated by inhibitory autophosphorylation.⁴ Casein kinase 1 epsilon has a prominent role in regulating circadian rhythms through phosphorylation of Per proteins.⁵ It has also been identified as a novel regulator of the tight junction and cadherin-based cell-cell contacts.^{6,7}

REFERENCES

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2. Cong F, et al. *Mol Cell Biol* 24(5):2000-2011, 2004.
3. Hino S, et al. *J Biol Chem* 278(16):14066-14073, 2003.
4. Swiatek W, et al. *J Biol Chem* 279(13):13011-13017, 2004.
5. Vielhaber E, et al. *Mol Cell Biol* 20(13):4888-4899, 2000.
6. McKenzie JA, et al. *FEBS Lett* 580(9):2388-2394, 2006.
7. Dupre-Crochet S, et al. *Mol Cell Biol* 27(10):3804-3816, 2007.

RELATED PRODUCTS

Product	Conjugate	Cat. No.
Protein A	Sepharose 4B	10-1041
rec-Protein G	Sepharose 4B	10-1241
ZyMAX™ Goat anti-rabbit IgG	Unconjugated	81-6100
ZyMAX™ Goat anti-mouse IgG	Unconjugated	81-6500

Secondary antibody conjugates.

Conjugate	Goat anti-rabbit IgG (H+L)	Goat anti-mouse IgG (H+L)	Ex/Em*	Fluorescence similar to--
Alexa Fluor® 488	A11008	A11001	495/519	FITC
Alexa Fluor® 555	A21428	A21422	555/565	Cy3
Alexa Fluor® 594	A11012	A11005	590/617	Texas Red
Alexa Fluor® 647	A21244	A21235	650/668	Cy5
HRP	81-6120	81-6520	NA**	NA
AP	81-6122	81-6522	NA	NA
Biotin	B2770	B2763	NA	NA

*Excitation/emission (nm); **Not applicable

For additional secondary antibody conjugates, visit www.invitrogen.com/antibodies

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