



Qty: 100 µg/400 µL

Rabbit anti-ASK (N-term)

Catalog No. 40-7300

Lot No.

Rabbit anti-ASK (N-term)

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.493

IMMUNOGEN

Synthetic peptide derived from the N-terminal region of the human ASK (DBF4, activator of S phase kinase) protein

SPECIFICITY

This antibody is specific for the ASK protein. On Western blots, it identifies the target band at ~80 kDa.

REACTIVITY

Reactivity has been confirmed with human Farage, NTERA-2, Daudi, K562 and HeLa cell lysates.

Sample	Western Blotting	Immunoprecipitation
Human	+++	0*

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

*No reactivity observed under conditions tested.

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 those listed below has not been determined. The following concentration ranges are recommended starting points 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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PI407300

(Rev 10/08) DCC-08-1089

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BACKGROUND

Activator of S phase kinase (ASK, DBF4) is a novel regulatory subunit of the human Cdc7 kinase complex that plays a pivotal role in G1/S cell cycle transition in mammalian cells.¹ The increase in Cdc7 kinase activity at the G1/S boundary is at least partly accounted for by the elevated expression of ASK in late G1.² ASK interacts with replication origins *in vivo*,³ suggesting that Cdc7 may trigger S phase by directly activating the replication initiation complexes assembled at the origins.

Human ASK protein levels are regulated during the cell cycle with a pattern that matches that of human Cdc7 protein kinase activity. Human Cdc7-ASK kinase is directly involved in regulating the initiation of DNA replication by targeting MCM2 protein in mammalian cells.^{4,5} Nuclear localization and chromatin binding of endogenous huCdc7 and GFP-ASK expressed during the post-mitotic phase are independently regulated, and although GFP-ASK is presumably imported into nuclei through its two nuclear localization signals at telophase, it may require additional signals for chromatin binding, the level of which increases at late G1 phase.⁶ A functional link may exist between menin, a tumor suppressor protein mutated in multiple endocrine neoplasia type I (MEN1), and ASK in the regulation of cell proliferation.⁷

REFERENCES

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2. Jackson AL, et al. *Mol Cell Biol* 13:2899-2908, 1993.
3. Dowell SJ, et al. *Science* 265:1243-1246, 1994.
4. Jiang W, et al. *Embo J* 18:5703-5713, 1999.
5. Masai H, et al. *Front Biosci* 4:D834-840, 1999.
6. Sato N, et al. *Genes Cells* 8:451-463, 2003.
7. Schnepf RW, et al. *Cancer Res* 64: 6791-6796, 2004.

RELATED PRODUCTS

Product	Conjugate	Cat. No.
Protein A	Sepharose [®] 4B	10-1041
rec-Protein G	Sepharose [®] 4B	10-1241

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TRITC	81-6114	81-6514
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Cy [™] 5	81-6116	81-6516
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