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HEXIM1 (D5Y5K) Rabbit mAb (PE Conjugate)

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Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
FC-FP	H Mk	Endogenous	Rabbit IgG	#O94992	10614

Product Usage Information**Application**

Flow Cytometry (Fixed/Permeabilized)

Dilution

1:50

Storage

Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.

Specificity/Sensitivity

HEXIM1 (D5Y5K) Rabbit mAb (PE Conjugate) recognizes endogenous levels of total HEXIM1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly63 of human HEXIM1 protein.

Description

This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated HEXIM1 (D5Y5K) Rabbit mAb #12604.

Background

Hexamethylene bis-acetamide-inducible protein 1 (HEXIM1) was originally identified in vascular smooth muscle cells as a protein that is upregulated upon treatment with the differentiating agent hexamethylene bisacetamide (1). HEXIM1 binds 7SK RNA, a highly abundant non-coding RNA, and together they act as a potent inhibitor of positive transcription elongation factor b (P-TEFb) (2,3). P-TEFb phosphorylates the C-terminal domain of the largest subunit of RNA polymerase II and is an important regulator of transcription elongation (4-8). 7SK RNA-bound HEXIM1 interacts with the cyclin T1 subunit of P-TEFb, sequestering P-TEFb in an inactive form leading to transcription inhibition (2,3). The regulation of the relative ratio of inactive to active P-TEFb in the cell by HEXIM1/7SK RNA is thought to play a critical role in regulation of a wide range of cellular gene expression programs such as estrogen and glucocorticoid receptor regulated genes (9-12).

Background References

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4. Buratowski, S. (2009) *Mol Cell* 36, 541-6.
5. Lenasi, T. and Barboric, M. *RNA Biol* 7, 145-50.
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7. Wada, T. et al. (1998) *EMBO J* 17, 7395-403.
8. Yamada, T. et al. (2006) *Mol Cell* 21, 227-37.
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12. Shimizu, N. et al. (2005) *Proc Natl Acad Sci U S A* 102, 8555-60.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

FC-FP: Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: Human **Mk:** Monkey

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