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RACK7 Polyclonal Antibody

Catalog # AP72138

Product Information

Application	WB, E, IHC-P
Primary Accession	Q9ULU4
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	131692

Additional Information

Gene ID	23613
Other Names	ZMYND8; KIAA1125; PRKCBP1; RACK7; Protein kinase C-binding protein 1; Cutaneous T-cell lymphoma-associated antigen se14-3; CTCL-associated antigen se14-3; Rack7; Zinc finger MYND domain-containing protein 8
Dilution	WB~~Western Blot: 1/500 - 1/2000. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/10000. Not yet tested in other applications. E~~N/A IHC-P~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

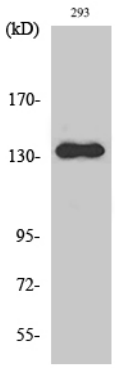
Name	ZMYND8
Synonyms	KIAA1125, PRKCBP1, RACK7
Function	Chromatin reader that recognizes dual histone modifications such as histone H3.1 dimethylated at 'Lys-36' and histone H4 acetylated at 'Lys-16' (H3.1K36me2-H4K16ac) and histone H3 methylated at 'Lys-4' and histone H4 acetylated at 'Lys-14' (H3K4me1-H3K14ac) (PubMed:26655721, PubMed:27477906, PubMed:31965980, PubMed:36064715). May act as a transcriptional corepressor for KDM5D by recognizing the dual histone signature H3K4me1-H3K14ac (PubMed:27477906). May also act as a transcriptional corepressor for KDM5C and EZH2 (PubMed:33323928). Recognizes acetylated histone H4 and recruits the NuRD chromatin remodeling complex to damaged chromatin for transcriptional repression and double-strand break repair by homologous recombination (PubMed:25593309, PubMed:27732854, PubMed:30134174). Also activates transcription elongation by RNA polymerase II through recruiting the P- TEFb complex to target promoters (PubMed:26655721, PubMed:30134174).

	Localizes to H3.1K36me2-H4K16ac marks at all-trans-retinoic acid (ATRA)-responsive genes and positively regulates their expression (PubMed:26655721). Promotes neuronal differentiation by associating with regulatory regions within the MAPT gene, to enhance transcription of a protein-coding MAPT isoform and suppress the non-coding MAPT213 isoform (PubMed:30134174, PubMed:35916866, PubMed:36064715). Suppresses breast cancer, and prostate cancer cell invasion and metastasis (PubMed:27477906, PubMed:31965980, PubMed:33323928).
Cellular Location	Nucleus. Chromosome. Cytoplasm. Note=Sequestered in the cytoplasm through the interaction with DBN1 (PubMed:28966017). Localizes to sites of DNA damage in a KAT5-dependent and DNA poly (ADP-ribose)-dependent manner (PubMed:25593309, PubMed:27732854). On chromatin, localizes to demethylated regions, active promoters, and transcription start sites (PubMed:27732854, PubMed:36064715).
Tissue Location	Expressed in neurons (at protein level) (PubMed:36064715). Absent in astrocytes (at protein level) (PubMed:36064715). Expressed in all tissues examined with highest expression in brain, lung, pancreas, and placenta (PubMed:11003709, PubMed:35916866). Expressed in cutaneous T-cell lymphomas (CTCL) (PubMed:11149944).

Background

May act as a transcriptional corepressor for KDM5D. Required for KDM5D-mediated down-regulation of diverse metastasis- associated genes; the function seems to involve the recognition of the dual histone signature H3K4me1-H3K14ac. Suppresses prostate cancer cell invasion.

Images



Western Blot analysis of various cells using RACK7 Polyclonal Antibody

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