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FZR1 Rabbit pAb

Catalog # AP98575

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q9UM11
Other Accession	Q9UM11
Reactivity	Rat, Human, Mouse
Predicted	Pig, Zebrafish, Chicken, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	55179
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human FZR1/CDC20C
Epitope Specificity	141-240/496
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the WD repeat CDC20/Fizzy family. Contains 7 WD repeats.
SUBUNIT	The unphosphorylated form interacts with APC/C during mitosis. Interacts with NINL. Interacts (in complex with the anaphase promoting complex APC) with MAD2L2; inhibits FZR1-mediated APC/C activation. Interacts with USP37. Interacts (via WD repeats) with MAK.
Post-translational modifications	Phosphorylated during mitosis, probably by maturation promoting factor (MPF), leading to its dissociation of the APC/C. Following DNA damage, it is dephosphorylated by CDC14B in G2 phase, leading to its reassociation with the APC/C, and allowing an efficient G2 DNA damage checkpoint.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Fizzy-related protein, known as fzr, is a conserved eukaryotic gene that has been recently identified as a 7WD domain family member and is implicated in cell cycle regulation of Drosophila and yeast. Retroviral overexpression of fzr in B-lymphoma cells reduces tumor formation. Fzr overexpression increases B-lymphoma cell susceptibility to natural killer cell (NK) cytotoxicity. Fzr has been implicated in a new category of genes which suppress B-cell tumorigenesis. Current research suggests a novel role for fzr in the target cell interaction with NK cells. Fzr also negatively regulates the levels of cyclins A, B and B3. Loss of fzr causes progression through an extra division cycle in the epidermis and inhibition of endoreduplication in the salivary gland, in addition to failure of cyclin removal. Conversely, premature fzr overexpression downregulates mitotic cyclins, inhibits mitosis and transforms mitotic cycles into endoreduplication cycles.

Additional Information

Gene ID	51343

Other Names	CDC20C; CDH1; DEE109; FZR; FZR2; HCDH; HCDH1; Fyr; FZR1_HUMAN; FZR1; CDC20-like protein 1; Cdh1/Hct1 homolog (hCDH1); KIAA1242; FZR1_MOUSE; Cdh1/Hct1 homolog; fizzy and cell division cycle 20 related 1; fizzy/cell division cycle 20 related 1 (Drosophila); fizzy/cell division cycle 20 related 1; CDC20 homolog 1
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	FZR1 (HGNC:24824)
Function	Substrate-specific adapter for the anaphase promoting complex/cyclosome (APC/C) E3 ubiquitin-protein ligase complex. Associates with the APC/C in late mitosis, in replacement of CDC20, and activates the APC/C during anaphase and telophase. The APC/C remains active in degrading substrates to ensure that positive regulators of the cell cycle do not accumulate prematurely. At the G1/S transition FZR1 is phosphorylated, leading to its dissociation from the APC/C. Following DNA damage, it is required for the G2 DNA damage checkpoint: its dephosphorylation and reassociation with the APC/C leads to the ubiquitination of PLK1, preventing entry into mitosis. Acts as an adapter for APC/C to target the DNA-end resection factor RBBP8/CtIP for ubiquitination and subsequent proteasomal degradation. Through the regulation of RBBP8/CtIP protein turnover, may play a role in DNA damage response, favoring DNA double-strand repair through error-prone non-homologous end joining (NHEJ) over error-free, RBBP8-mediated homologous recombination (HR) (PubMed:25349192).
Cellular Location	[Isoform 2]: Nucleus
Tissue Location	Isoform 2 is expressed at high levels in heart, liver, spleen and some cancer cell lines whereas isoform 3 is expressed only at low levels in these tissues.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.