10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

ZCWCC1 Rabbit pAb

Catalog # AP98611

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q9Y6X9
Other Accession	Q9Y6X9
Reactivity	Rat, Human, Mouse
Predicted	Pig, Rabbit, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	117823
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human ZCWCC1
Epitope Specificity	791-890/1032
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Contains 1 CW-type zinc finger.
SUBUNIT	Interacts with HDAC4.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The CW domain is a structural module found in many vertebrate, parasitic and plant proteins. It consists of a mononuclear four-cysteine zinc-finger domain that plays a role in DNA binding, chromatin methylation and early embryonic development. ZCWCC1 (zinc finger CW-type coiled-coil domain protein 1), also known as MORC2 (MORC family CW-type zinc finger protein 2) or ZCW3, is a 1,032 amino acid protein that contains one CW-type zinc finger domain. ZCWCC1 is located on chromosome 22 and is ubiquitously expressed with highest expression in pancreas, smooth muscle and testis. Expression of ZCWCC1 is upregulated in hypoxia, a pathological condition characterized by an inadequate supply of oxygen in the blood.

Additional Information

Gene ID	22880
Other Names	CMT2Z; DIGFAN; ZCW3; ZCWCC1; MORC2_HUMAN; MORC2; MORC family CW-type zinc finger protein 2; Zinc finger CW-type coiled-coil domain protein 1; 3.6.1.-; KIAA0852; MORC family CW-type zinc finger 2; zinc finger, CW-type with coiled-coil domain 1; zinc finger, CW type with coiled-coil domain 1
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:400-800,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	MORC2 {ECO:0000303|PubMed:20225202, ECO:0000312|HGNC:HGNC:23573}
Function	ATP-dependent chromatin remodeler essential for epigenetic silencing by the HUSH (human silencing hub) complex (PubMed:28581500, PubMed:29440755, PubMed:32693025, PubMed:40593625). Recruited by HUSH to target site in heterochromatin, the ATPase activity and homodimerization are critical for HUSH-mediated silencing (PubMed:28581500, PubMed:29440755, PubMed:32693025). Represses germ cell-related genes and L1 retrotransposons in collaboration with SETDB1 and the HUSH complex, the silencing is dependent of repressive epigenetic modifications, such as H3K9me3 mark. Silencing events often occur within introns of transcriptionally active genes, and lead to the down-regulation of host gene expression (PubMed:29211708). During DNA damage response, regulates chromatin remodeling through ATP hydrolysis. Upon DNA damage, is phosphorylated by PAK1, both colocalize to chromatin and induce H2AX expression. ATPase activity is required and dependent of phosphorylation by PAK1 and presence of DNA (PubMed:23260667). Recruits histone deacetylases, such as HDAC4, to promoter regions, causing local histone H3 deacetylation and transcriptional repression of genes such as CA9 (PubMed:20110259, PubMed:20225202). Exhibits a cytosolic function in lipogenesis, adipogenic differentiation, and lipid homeostasis by increasing the activity of ACLY, possibly preventing its dephosphorylation (PubMed:24286864). Together with MPHOSPH8, mediates silencing of protocadherin genes in the nervous system (By similarity).
Cellular Location	Nucleus. Cytoplasm, cytosol Chromosome Nucleus matrix. Note=Mainly located in the nucleus (PubMed:20225202). Upon phosphorylation at Ser-739, recruited to damaged chromatin (PubMed:23260667)
Tissue Location	Highly expressed in smooth muscle, pancreas and testis

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