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

HCF-1 Rabbit pAb

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Catalog # AP58756

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	P51610
Reactivity	Mouse
Predicted	Human, Rat, Dog, Pig, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	208732
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human HCF-1
Epitope Specificity	201-300/2035
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasm. Nucleus. Note=HCFC1R1 modulates its subcellular localization and overexpression of HCFC1R1 leads to accumulation of HCFC1 in the cytoplasm. Nuclear in general, but uniquely cytoplasmic in trigeminal ganglia, becoming nuclear upon HSV reactivation from the latent state. Non-processed HCFC1 associates with chromatin.
SIMILARITY	Contains 5 Kelch repeats.
SUBUNIT	Composed predominantly of six polypeptides ranging from110 to 150 kDa and a minor 300 kDa polypeptide. The majority ofN-and C-terminal cleavage products remain tightly, albeitnon-covalently, associated. Interacts with POU2F1, CREB3, ZBTB17,EGR2, E2F4, CREBZF, SP1, GABP2, Sin3 HDAC complex (SIN3A, HDAC1,HDAC2, SDS3), SAP30, SIN3B and FHL2. Component of a MLL1 complex,composed of at least the core components MLL, ASH2L, HCFC1, WDR5and RBBP5, as well as the facultative components C17orf49, CHD8,DPY30, E2F6, HCFC2, HSP70, INO80C, KANSL1, LAS1L, MAX, MCRS1, MEN1,MGA, KAT8, PELP1, PHF20,. PRP31, RING2, RUVBL1, RUVBL2, SENP3,TAF1, TAF4, TAF6, TAF7, TAF9 and TEX10. Component of the MLL5-Lcomplex, composed of at least MLL5, STK38, PPP1CA, PPP1CB, PPP1CC,HCFC1, ACTB and OGT. Component of a THAP1/THAP3-HCFC1-OGT complexthat is required for the regulation of the transcriptional activityof RRM1. Interacts directly with OGT; the interaction, whichrequires the HCFC1 cleavage site domain, glycosylates and promotesthe proteolytic processing of HCFC1, retains OGT in the nucleus andimpacts the expression of herpes simplex virus immediate earlyviral genes. Interacts directly with THAP3 (via its HBM). Interacts(via the Kelch-repeat domain) with THAP1 (via the HBM); theinteraction recruits HCHC1 to the RRM1. Interacts with HCFC1R1 andTHAP11. Associates with the VP16-induced complex; binding to HCFC1activates the viral transcriptional activator VP16 for associationwith POU2F1, to form a multiprotein-DNA complex responsible foractivating transcription of the viral immediate early genes.Component of the SET1 complex, at least composed of the catalyticsubunit (SETD1A or SETD1B),

	WDR5, WDR82, RBBP5, ASH2L, CXXC1, HCFC1and DPY30. Component of the NSL complex at least composed ofMOF/KAT8, KANSL1, KANSL2, KANSL3, MCRS1, PHF20, OGT1/OGT, WDR5 andHCFC1.
Post-translational modifications	Proteolytically cleaved at one or several PPCE--THET siteswithin the HCF repeats. Further cleavage of the primary N- andC-terminal chains results in a 'trimming' and accumulation of thesmaller chains. Cleavage is promoted by O-glycosylation.O-glycosylated. O-glycosylation promotes proteolyticprocessing.Ubiquitinated. Lys-1807 and Lys-1808 are ubiquitinated bothvia 'Lys-48'- and 'Lys-63'-linked polyubiquitin chains. BAP1mediated deubiquitination of 'Lys-48'-linked polyubiquitin chains;deubiquitination by BAP1 does not seem to stabilize the protein.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene is a member of the host cell factor family and encodes a protein with five Kelch repeats, a fibronectin-like motif, and six HCF repeats, each of which contains a highly specific cleavage signal. This nuclear coactivator is proteolytically cleaved at one of the six possible sites, resulting in the creation of an N-terminal chain and the corresponding C-terminal chain. The final form of this protein consists of noncovalently bound N- and C-terminal chains. The protein is involved in control of the cell cycle and transcriptional regulation during herpes simplex virus infection. Alternatively spliced variants which encode different protein isoforms have been described; however, not all variants have been fully characterized. [provided by RefSeq, Jul 2008]

Additional Information

Gene ID	3054
Other Names	Host cell factor 1, HCF, HCF-1, C1 factor, CFF, VCAF, VP16 accessory protein, HCF N-terminal chain 1, HCF N-terminal chain 2, HCF N-terminal chain 3, HCF N-terminal chain 4, HCF N-terminal chain 5, HCF N-terminal chain 6, HCF C-terminal chain 1, HCF C-terminal chain 2, HCF C-terminal chain 3, HCF C-terminal chain 4, HCF C-terminal chain 5, HCF C-terminal chain 6, HCFC1 {ECO:0000303|PubMed:7829097, ECO:0000312|HGNC:HGNC:4839}
Target/Specificity	Highly expressed in fetal tissues and the adult kidney. Present in all tissues tested.
Dilution	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

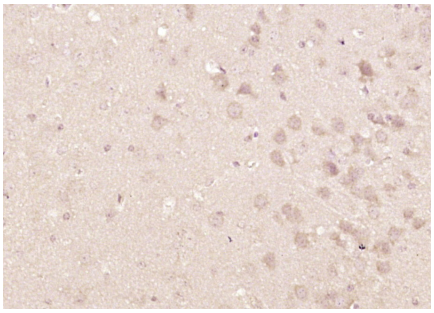
Name	HCFC1 {ECO:0000303|PubMed:7829097, ECO:0000312|HGNC:HGNC:4839}
Function	Transcriptional coregulator (By similarity). Serves as a scaffold protein, bridging interactions between transcription factors, including THAP11 and ZNF143, and transcriptional coregulators (PubMed:26416877). Involved in control of the cell cycle (PubMed:10629049, PubMed:10779346, PubMed:15190068, PubMed:16624878, PubMed:23629655). Also antagonizes transactivation by ZBTB17 and GABP2; represses ZBTB17 activation of the p15(INK4b) promoter and inhibits its ability to recruit p300 (PubMed:10675337, PubMed:12244100). Coactivator for EGR2 and GABP2

	(PubMed:12244100, PubMed:14532282). Tethers the chromatin modifying Set1/Ash2 histone H3 'Lys-4' methyltransferase (H3K4me) and Sin3 histone deacetylase (HDAC) complexes (involved in the activation and repression of transcription, respectively) together (PubMed:12670868). Component of a THAP1/THAP3-HCFC1-OGT complex that is required for the regulation of the transcriptional activity of RRM1 (PubMed:20200153). As part of the NSL complex it may be involved in acetylation of nucleosomal histone H4 on several lysine residues (PubMed:20018852). Recruits KMT2E/MLL5 to E2F1 responsive promoters promoting transcriptional activation and thereby facilitates G1 to S phase transition (PubMed:23629655). Modulates expression of homeobox protein PDX1, perhaps acting in concert with transcription factor E2F1, thereby regulating pancreatic beta-cell growth and glucose-stimulated insulin secretion (By similarity). May negatively modulate transcriptional activity of FOXO3 (By similarity).
Cellular Location	Cytoplasm. Nucleus. Note=HCFC1R1 modulates its subcellular localization and overexpression of HCFC1R1 leads to accumulation of HCFC1 in the cytoplasm (PubMed:12235138). Non- processed HCFC1 associates with chromatin. Colocalizes with CREB3 and CANX in the ER.
Tissue Location	Highly expressed in fetal tissues and the adult kidney. Present in all tissues tested.

Background

This gene is a member of the host cell factor family and encodes a protein with five Kelch repeats, a fibronectin-like motif, and six HCF repeats, each of which contains a highly specific cleavage signal. This nuclear coactivator is proteolytically cleaved at one of the six possible sites, resulting in the creation of an N-terminal chain and the corresponding C-terminal chain. The final form of this protein consists of noncovalently bound N- and C-terminal chains. The protein is involved in control of the cell cycle and transcriptional regulation during herpes simplex virus infection. Alternatively spliced variants which encode different protein isoforms have been described; however, not all variants have been fully characterized. [provided by RefSeq, Jul 2008]

Images



Paraformaldehyde-fixed, paraffin embedded (mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (HCF-1) Polyclonal Antibody, Unconjugated (AP58756) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.