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DBC1 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP53276

Product Information

Application	WB, ICC, IP
Primary Accession	Q8N163
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	102902

Additional Information

Gene ID	57805
Other Names	DBCCR1;Deleted in bladder cancer protein 1;Deleted in bladder cancer protein 1 recursor; FAM5A;Protein FAM5A.
Dilution	WB~~1:500 ICC~~1:200 IP~~1:500
Format	Purified mouse monoclonal antibody in buffer containing 0.1M Tris-Glycine (pH 7.4, 150 mM NaCl) with 0.09% (W/V) sodium azide, 50%,glycerol
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	CCAR2
Synonyms	DBC1, KIAA1967
Function	Core component of the DBIRD complex, a multiprotein complex that acts at the interface between core mRNP particles and RNA polymerase II (RNAPII) and integrates transcript elongation with the regulation of alternative splicing: the DBIRD complex affects local transcript elongation rates and alternative splicing of a large set of exons embedded in (A + T)-rich DNA regions (PubMed:22446626). Inhibits SIRT1 deacetylase activity leading to increasing levels of p53/TP53 acetylation and p53-mediated apoptosis (PubMed:18235501, PubMed:18235502, PubMed:23352644). Inhibits SUV39H1 methyltransferase activity (PubMed:19218236). Mediates ligand-dependent transcriptional activation by nuclear hormone receptors (PubMed:19131338). Plays a critical role in maintaining genomic stability and cellular integrity following UV-induced genotoxic stress (PubMed:23398316). Regulates the circadian expression of the core clock components NR1D1 and BMAL1 (PubMed:23398316). Enhances the transcriptional repressor activity of

	NR1D1 through stabilization of NR1D1 protein levels by preventing its ubiquitination and subsequent degradation (PubMed:23398316). Represses the ligand-dependent transcriptional activation function of ESR2 (PubMed:20074560). Acts as a regulator of PCK1 expression and gluconeogenesis by a mechanism that involves, at least in part, both NR1D1 and SIRT1 (PubMed:24415752). Negatively regulates the deacetylase activity of HDAC3 and can alter its subcellular localization (PubMed:21030595). Positively regulates the beta-catenin pathway (canonical Wnt signaling pathway) and is required for MCC-mediated repression of the beta-catenin pathway (PubMed:24824780). Represses ligand-dependent transcriptional activation function of NR1H2 and NR1H3 and inhibits the interaction of SIRT1 with NR1H3 (PubMed:25661920). Plays an important role in tumor suppression through p53/TP53 regulation; stabilizes p53/TP53 by affecting its interaction with ubiquitin ligase MDM2 (PubMed:25732823). Represses the transcriptional activator activity of BRCA1 (PubMed:20160719). Inhibits SIRT1 in a CHEK2 and PSEM3-dependent manner and inhibits the activity of CHEK2 in vitro (PubMed:25361978).
Cellular Location	Nucleus. Cytoplasm. Cytoplasm, cytoskeleton, spindle. Note=Recruited to chromatin, post-UV irradiation. Sequestered to the cytoplasm in the presence of MCC. Translocated to the cytoplasm during UV-induced apoptosis.
Tissue Location	Expressed in gastric carcinoma tissue and the expression gradually increases with the progression of the carcinoma (at protein level). Expressed ubiquitously in normal tissues. Expressed in 84 to 100% of neoplastic breast, lung, and colon tissues

Background

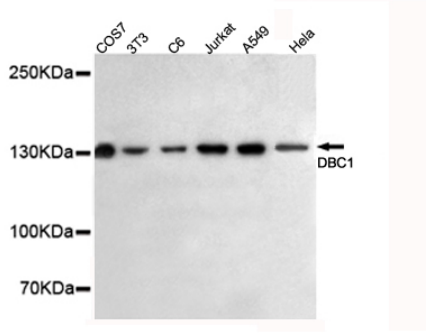
Core component of the DBIRD complex, a multiprotein complex that acts at the interface between core mRNP particles and RNA polymerase II (RNAPII) and integrates transcript elongation with the regulation of alternative splicing: the DBIRD complex affects local transcript elongation rates and alternative splicing of a large set of exons embedded in (A + T)-rich DNA regions. Inhibits SIRT1 deacetylase activity leading to increasing levels of p53/TP53 acetylation and p53-mediated apoptosis. Inhibits SUV39H1 methyltransferase activity. As part of a histone H3- specific methyltransferase complex may mediate ligand-dependent transcriptional activation by nuclear hormone receptors. Plays a critical role in maintaining genomic stability and cellular integrity following UV-induced genotoxic stress. Regulates the circadian expression of the core clock components NR1D1 and ARNTL/BMAL1. Enhances the transcriptional repressor activity of NR1D1 through stabilization of NR1D1 protein levels by preventing its ubiquitination and subsequent degradation.

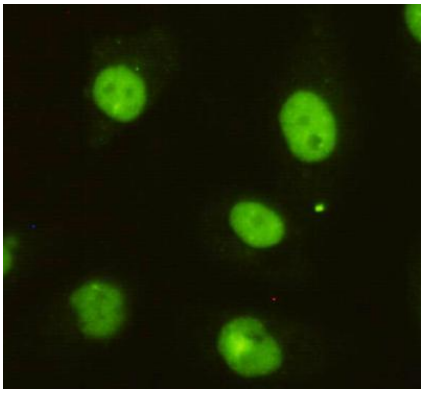
References

Ota T.,et al.Nat. Genet. 36:40-45(2004).
Bechtel S.,et al.BMC Genomics 8:399-399(2007).
Nusbaum C.,et al.Nature 439:331-335(2006).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.
Nagase T.,et al.DNA Res. 8:319-327(2001).

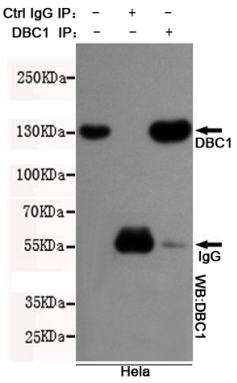
Images

Western blot detection of DBC1 in HeLa,A549,Jurkat,C6,3T3 and COS7 cell lysates using DBC1 mouse mAb (1:500 diluted).Predicted band size:130KDa.Observed band size:130KDa.





Immunocytochemistry of HeLa cells using anti-DBC1 mouse mAb diluted 1:200.



Immunoprecipitation analysis of Hela cell lysates using DBC1 mouse mAb.

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