

Rabbit anti-Human DBC1 Polyclonal Antibody | anti-DBC1 antibody

Phospho-DBC1 (Thr454) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329484	Rabbit	Human	ELISA, Immunocytochemistry, Immunofluorescence, Western Blot

PRODUCT SYNONYMS

DBC1; Polyclonal Antibody; Phospho-DBC1 (Thr454) Antibody; CCAR2; Cell cycle and apoptosis regulator 2; Cell division cycle and apoptosis regulator protein 2; DBC-1; DBC.1; DBIRD complex subunit KIAA1967; Deleted in breast cancer 1; Deleted in breast cancer gene 1 protein; K1967_HUMAN; KIAA1967; NET35; p30 DBC; p30 DBC protein; p30DBC; anti-DBC1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-DBC1 (Thr454) Antibody detects endogenous levels of DBC1 only when phosphorylated at Thr454. Tissue Specificity: 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.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-DBC1 antibody	ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)
Immunogen	A synthesized peptide derived from human DBC1 around the phosphorylation site of Thr454.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	ATM/ATR-mediated phosphorylation at Thr-454 upon DNA damage promotes binding to SIRT1. Phosphorylation at Thr-454 promotes its sumoylation by switching the binding partner of CCAR2 from SENP1 to PIAS3. Acetylation at Lys-112 and Lys-215 by KAT8 prevents inhibitory binding to SIRT1 and increases its deacetylase activity. Genotoxic stress induces its sumoylation and sumoylation promotes the SIRT1-CCAR2 interaction which in turn inhibits SIRT1-mediated deacetylation of p53/TP53. Sumoylation leads to transcriptional activation of p53/TP53 by sequestering SIRT1 from p53/TP53. Desumoylated by SENP1.
Subunit Structure	Component of the DBIRD complex. Interacts with ZNF326/ZIRD; the interaction is direct. Interacts (via N-terminus) with SIRT1, which inhibits the deacetylation of substrates. Interacts (via N-terminus) with SUV39H1; this interaction abolishes the interaction with SIRT1. Part of a complex composed at least of ASCL2, EMSY, HCFC1, HSPA8, CCAR2, MATR3, MKI67, RBBP5, TUBB2A, WDR5 and ZNF335; this complex may have a histone H3-specific methyltransferase activity. Interacts with NR1D1. Interacts (via N-terminus) with ESR1 and ESR2. Interacts (via N-terminus) with HDAC3 (via C-terminus). Interacts with HDAC1 and MED2F. Interacts with MCC. Interacts (via N-terminus) with NR1H2 and NR1H3 in a ligand-independent manner. Interacts with CSNK2A1. Interacts (via N-terminus) with p53/TP53. Interacts (via N-terminus) with BRCA1 (via the BRCT domains). Interacts (via N-terminus) with CHEK2 (via protein kinase domain). Interacts with PSEM3. Interacts (via N-terminus) with PSIA3 and SENP1. The sumoylated form shows a preferential interaction with SIRT1 as compared to its unmodified form.

Subcellular Location	Nucleus. Cytoplasm. Note: Recruited to chromatin, post-UV irradiation. Sequestered to the cytoplasm in the presence of MCC. Translocated to the cytoplasm during UV-induced apoptosis.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IF (Immunofluorescence)

Staining HeLa cells(4h of LPS treatment) by IF/ICC. The samples were fixed with PFA and permeabilized in 0.1% Triton X-100,then blocked in 10% serum for 45 minutes at 25 degree C. Samples were then incubated with primary Ab(AF4482 1:200) and mouse anti-beta tubulin Ab(T0023 1:200) for 1 hour at 37 degree C. An AlexaFluor594 conjugated goat anti-rabbit IgG(H+L) Ab(Red) and an AlexaFluor488 conjugated goat anti-mouse IgG(H+L) Ab(Green) were used as the secondary antibody.The nuclear counter stain is DAPI(blue).



WB (Western Blot)

Western blot analysis of extracts from 293 UV, using Phospho-DBC1 (Thr454) Antibody. Lane1 was treated with phospho-blocking peptide, Lane2 was treated with non-phospho-blocking peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-DBC1 antibody	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. Represses the ligand-dependent transcriptional activation function of ESR2. Acts as a regulator of PCK1 expression and gluconeogenesis by a mechanism that involves, at least in part, both NR1D1 and SIRT1. Negatively regulates the deacetylase activity of HDAC3 and can alter its subcellular localization. Positively regulates the beta-catenin pathway (canonical Wnt signaling pathway) and is required for MCC-mediated repression of the beta-catenin pathway. Represses ligand-dependent transcriptional activation function of NR1H2 and NR1H3 and inhibits the interaction of SIRT1 with NR1H3. Plays an important role in tumor suppression through p53/TP53 regulation; stabilizes p53/TP53 by affecting its interaction with ubiquitin ligase MDM2. Represses the transcriptional activator activity of BRCA1. Inhibits SIRT1 in a CHEK2 and PSEM3-dependent manner and inhibits the activity of CHEK2 in vitro.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	24432106
NCBI GeneID	57805
NCBI Accession #	NP_066997.3
NCBI GenBank Nucleotide #	NM_021174.5
UniProt Accession #	Q8N163; Q6P0Q9; Q8N3G7; Q8N8M1; Q8TF34; Q9H9Q9; Q9HD12; Q9NT55; A6NL03; B2RB79; D3DSR6
Molecular Weight	102,902 Da
NCBI Official Full Name	DBIRD complex subunit KIAA1967
NCBI Official Synonym Full Names	KIAA1967
NCBI Official Symbol	KIAA1967
NCBI Official Synonym Symbols	DBC1; DBC-1; NET35; p30DBC; p30 DBC
NCBI Protein Information	DBIRD complex subunit KIAA1967; p30 DBC protein; deleted in breast cancer 1

UniProt Protein Name	DBIRD complex subunit KIAA1967
UniProt Gene Name	KIAA1967
UniProt Synonym Gene Names	DBC1; DBC-1; DBC.1
UniProt Entry Name	K1967_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/dbc1-antibody-peptide-elisa-immunocytochemistry-immunofluorescence-western-blot-elisa/329484>