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CIITA Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP55353

Product Information

Application	WB, IHC-P, IHC-F, IF, ICC, E
Primary Accession	P33076
Reactivity	Rat, Pig, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	123415
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human CIITA
Epitope Specificity	701-800/1130
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	Nucleus.
SIMILARITY	Contains 4 LRR (leucine-rich) repeats. Contains 1 NACHT domain.
SUBUNIT	Interacts with ZXDA and ZXDC. Interacts with PML (isoform PML-2).
DISEASE	Defects in CIITA are a cause of bare lymphocyte syndrome type 2 (BLS2) [MIM:209920]; also known as hereditary MHC class II deficiency or HLA class II-deficient combined immunodeficiency. BLS2 is a severe combined immunodeficiency disease with early onset. It is characterized by a profound defect in constitutive and interferon-gamma induced MHC II expression, absence of cellular and humoral T-cell response to antigen challenge, hypogammaglobulinemia and impaired antibody production. The consequence include extreme susceptibility to viral, bacterial and fungal infections.
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 encodes a protein with an acidic transcriptional activation domain, 4 LRRs (leucine-rich repeats) and a GTP binding domain. The protein is located in the nucleus and acts as a positive regulator of class II major histocompatibility complex gene transcription, and is referred to as the "master control factor" for the expression of these genes. The protein also binds GTP and uses GTP binding to facilitate its own transport into the nucleus. Once in the nucleus it does not bind DNA but rather uses an intrinsic acetyltransferase (AT) activity to act in a coactivator-like fashion. Mutations in this gene have been associated with bare lymphocyte syndrome type II (also known as hereditary MHC class II deficiency or HLA class II-deficient combined immunodeficiency), increased susceptibility to rheumatoid arthritis, multiple sclerosis, and possibly myocardial infarction. [provided by RefSeq, Jul 2008]

Additional Information

Gene ID	4261
Other Names	MHC class II transactivator, CIITA, 2.3.1.-, 2.7.11.1, CIITA (HGNC:7067), MHC2TA
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
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	CIITA (HGNC:7067)
Synonyms	MHC2TA
Function	Essential for transcriptional activity of the HLA class II promoter; activation is via the proximal promoter (PubMed:16600381, PubMed:17493635, PubMed:7749984, PubMed:8402893). Does not bind DNA (PubMed:16600381, PubMed:17493635, PubMed:7749984, PubMed:8402893). May act in a coactivator-like fashion through protein-protein interactions by contacting factors binding to the proximal MHC class II promoter, to elements of the transcription machinery, or both PubMed:8402893, PubMed:7749984, (PubMed:16600381, PubMed:17493635). Alternatively it may activate HLA class II transcription by modifying proteins that bind to the MHC class II promoter (PubMed:16600381, PubMed:17493635, PubMed:7749984, PubMed:8402893). Also mediates enhanced MHC class I transcription; the promoter element requirements for CIITA-mediated transcription are distinct from those of constitutive MHC class I transcription, and CIITA can functionally replace TAF1 at these genes. Activates CD74 transcription (PubMed:32855215). Exhibits intrinsic GTP- stimulated acetyltransferase activity (PubMed:11172716). Exhibits serine/threonine protein kinase activity: can phosphorylate the TFIID component TAF7, the RAP74 subunit of the general transcription factor TFIIF, histone H2B at 'Ser-37' and other histones (in vitro) (PubMed:24036077). Has antiviral activity against Ebola virus and coronaviruses, including SARS-CoV-2 (PubMed:32855215). Induces resistance by up-regulation of the p41 isoform of CD74, which blocks cathepsin-mediated cleavage of viral glycoproteins, thereby preventing viral fusion (PubMed:32855215).
Cellular Location	Nucleus. Nucleus, PML body. Note=Recruited to PML body by PML