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Product datasheet for TA346454

VPREB1 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	WB
Reactivity:	Human
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	The immunogen for anti-VPREB1 antibody: synthetic peptide directed towards the middle region of human VPREB1. Synthetic peptide located within the following region: TIRLTCTLRNDHDIGVYSVYWYQQRPGHPPRFLLRYFSQSDKSQGPQVPP
Formulation:	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Purification:	Affinity Purified
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	16 kDa
Gene Name:	pre-B lymphocyte 1
Database Link:	NP_009059 Entrez Gene 7441 Human P12018

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Background: VPREB1 belongs to the immunoglobulin superfamily and is expressed selectively at the early stages of B cell development, namely, in proB and early preB cells. This gene encodes the iota polypeptide chain that is associated with the Ig-mu chain to form a molecular complex which is expressed on the surface of pre-B cells. The complex is thought to regulate Ig gene rearrangements in the early steps of B-cell differentiation.CD179a (VpreB) is a 126 aa-long polypeptide with apparent MW of 16-18 kDa. It is expressed selectively at the early stages of B cell development, namely, in proB and early preB cells. CD179a has an Ig V domain-like structure, but lacks the last beta-strand (beta7) of a typical V domain. Instead, it has a carboxyl terminal end that shows no sequence homologies to any other proteins. CD179a associates non-covalently with CD179b (lambda5 or lambda-like) carrying an Ig C domain-like structure to form an Ig light chain-like structure, which is called the surrogate light chain or pseudo light chain. In this complex, the incomplete V domain of CD179a appears to be complemented by the extra beta7 strand of CD179b. On the surface of early preB cells, CD179a/CD179b surrogate light chain is disulfide-linked to membrane-bound Ig mu heavy chain in association with a signal transducer CD79a/CD79b heterodimer to form a B cell receptor-like structure, so-called preB cell receptor (preBCR). Though no CD179a-related human disease or pathology has been reported yet, the deficiency of other components of preB cell receptor such as CD179b, Ig mu heavy chain and CD79a has been shown to result in severe impairment of B cell development and agammaglobulinemia in human. PreBCR transduces signals for: 1) cellular proliferation, differentiation from the proB cell to preB cell stage, 2) allelic exclusion at the Ig heavy chain gene locus, and 3) promotion of Ig light chain gene rearrangements. Thus, preBCR functions as a checkpoint in early B cell development to monitor the production of Ig mu heavy chain through a functional rearrangement of Ig heavy chain gene as well as the potency of Ig mu heavy chain to associate with Ig light chain. Publication Note: This RefSeq record includes a subset of the publications that are available for this gene. Please see the Entrez Gene record to access additional publications.

Synonyms: CD179a; IGI; IGVPB; VPREB

Note: Immunogen Sequence Homology: Human: 100%; Horse: 93%; Mouse: 93%; Rabbit: 93%; Pig: 92%; Bovine: 92%; Guinea pig: 92%; Dog: 86%; Rat: 79%

Protein Families: Druggable Genome

Product images:

WB Suggested Anti-VPREB1 Antibody Titration: 0.2-1 ug/ml; ELISA Titer: 1: 12500; Positive Control: HepG2 cell lysate