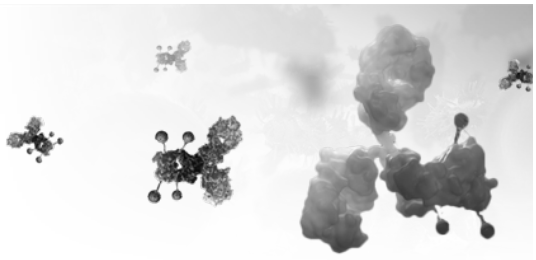

Mouse anti-Human E12/E47 monoclonal antibody, clone H09-382 (CABT-B9202)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Immunogen	Recombinant Human E12
Isotype	IgG1
Source/Host	Mouse
Species Reactivity	Human
Clone	H09-382
Purification	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Conjugate	Unconjugated
Applications	WB; Gel shift; IP
Format	Liquid
Concentration	0.5 mg/ml
Size	100 µg
Buffer	Aqueous buffered solution containing ≤0.09% sodium azide.
Storage	Store undiluted at -20°C.

BACKGROUND

Introduction	B lymphoid cells go through many intermediate steps before becoming plasma ells

45-1 Ramsey Road, Shirley, NY 11967, USA
Email: info@creative-diagnostics.com
Tel: 1-631-624-4882 Fax: 1-631-938-8221

whichproduce and secrete immunoglobulins (Ig). The earliest stage of B-cell differentiate is represented by pro-B lymphocytes that contain both the Ig heavy- and light-chain genes in the transcriptionally inactive germ line cnfiguration. As ro-B lymphocytes differentiate into pro-B cells, Ig heavy-chain genes rearrange and get transcribed and translated. However, the Ig lightchain genes are not transcribed before the pre-B cells differentiate into mature B-lymphocytes. The developmental regulation of the Ig gene expression is dependent on various sequences in the Ig enhancer region. One class of such regulatory sequence elements comprises the so-called E-boxes which share the NNCANNTGNN consensus sequence. The E2 boxes are particularly interesting because they are present in muscle and pancreas-specific enhancers. A family of proteins binds to the E2 box. These proteins share a common amino acid sequence motif that is proposed to form two amphipathic helices interrupted by a loop, designated the helix-loop-helix (HLH) motif. The HLH motif mediates homo- as well as heterodimerization with other HLH proteins. Most HLH proteins possess a basic region located N terminal of the HLH region which is responsible for DNA binding. Two E2 box binding proteins have been described (E12 and E47) that arise as alternatively spliced form of the E2A gene. E12 and E47 are identical except in the HLH region. These two proteins have been directly implicated in the regulation of B-cell, muscle and pancreas-specific gene expression. The E2-2 gene product is closely related to the E2A gene products but is encoded by a separate gene. E47 migrates at a reduced molecular weight of ~75 kDa. G98-271 reacts specifically with human E12 and E47 protein, alternatively spliced products of the E2A gene. It does not cross-react with the E2-2 protein. The specificity of the antibody was tested by immunoprecipitation and electrophoretic mobility band shift assays (EMSA) using recombinant protein (E2-2, E12, and E4 7). The HLH motif as well as flanking regions of recombinant human E12 potein was used as the immunogen.

Keywords	TCF3; transcription factor 3; E2A; E47; ITF1; VDIR; TCF-3; bHLHb21; transcription factor E2-alpha; kappa-E2-binding factor; VDR interacting repressor; transcription factor ITF-1; helix-loop-helix protein HE47; transcription factor 3 variant 3; immunoglobulin transcription factor 1; vitamin D receptor-interacting repressor; class B basic helix-loop-helix protein 21; negative vitamin D response element-binding protein; transcription factor 3 (E2A immunoglobulin enhancer binding factors E12/E47);

GENE INFORMATION

Entrez Gene ID	6929
UniProt ID	P15923

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