

Product name:	TCF-3 Rabbit Polyclonal Antibody
Cat number:	ABN18734
Conjugate:	Unconjugated
Size:	100µL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	The antiserum was produced against synthesized peptide derived from human TCF3. AA range:571-620
Reactivity:	Human,Mouse,Rat
Applications:	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:10000-1:20000
Molecular Weight:	68kDa
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

This gene encodes a member of the E protein (class I) family of helix-loop-helix transcription factors. E proteins activate transcription by binding to regulatory E-box sequences on target genes as heterodimers or homodimers, and are inhibited by heterodimerization with inhibitor of DNA-binding (class IV) helix-loop-helix proteins. E proteins play a critical role in lymphopoiesis, and the encoded protein is required for B and T lymphocyte development. Deletion of this gene or diminished activity of the encoded protein may play a role in lymphoid malignancies. This gene is also involved in several chromosomal translocations that are associated with lymphoid malignancies including pre-B-cell acute lymphoblastic leukemia (t(1;19), with PBX1), childhood leukemia (t(19;19), with TFPT) and acute leukemia (t(12;19), with ZNF384). Alternatively spliced transcript variants encoding multiple isoforms have been identified.

disease:Chromosomal aberrations involving TCF3 are cause of forms of pre-B-cell acute lymphoblastic leukemia (B-ALL). Translocation t(1;19)(q23;p13.3) with PBX1; Translocation t(17;19)(q22;p13.3) with HLF. Inversion inv(19)(p13;q13) with TFPT.

function:Heterodimers between TCF3 and tissue-specific basic helix-loop-helix (bHLH) proteins play major roles in determining tissue-specific cell fate during embryogenesis, like muscle or early B-cell differentiation. Dimers bind DNA on E-box motifs: 5'-CANNTG-3'. Binds to the kappa-E2 site in the kappa immunoglobulin gene enhancer.

PTM:Phosphorylated following NGF stimulation.

similarity:Contains 1 basic helix-loop-helix (bHLH) domain.

subunit:Efficient DNA binding requires dimerization with another bHLH protein. Forms a heterodimer with ASH1 and TWIST2. Isoform E12 interacts with GRIPE and FIGLA (By similarity). Interacts with PTF1A and TGFB1I1. Component of a nuclear TAL-1 complex composed at least of CBFA2T3, LDB1, TAL1 and TCF3 (By similarity). Interacts with UBE2I.