

TFEB Polyclonal Antibody

Description

Product type	Primary Antibody
Code	BT-AP08949
Host	Rabbit
Isotype	IgG
Size	20ul, 50ul, 100ul
Immunogen	The antiserum was produced against synthesized peptide derived from human TFEB. AA range:10-59
Mol wt	52865
Species reactivity	Human, Mouse
Clonality	Polyclonal
Recommended application	WB, IHC-p, ELISA
Concentration	1 mg/ml
Full name	TFEB Antibody
Synonyms	TFEB; BHLHE35; Transcription factor EB; Class E basic helix-loop-helix protein 35; bHLHe35

This product is for research use only, not for use in human, therapeutic or diagnostic procedure.

Background

Transcription factor EB (TFEB) is a member of the Myc-related, bHLH leucine-zipper family of transcription factors that drives the expression of a network of genes known as the Coordinated Lysosomal Expression and Regulation (CLEAR) network. TFEB specifically recognizes and binds regulatory sequences within the CLEAR box (GTCACGTGAC) of lysosomal and autophagy genes, resulting in the up-regulated expression of genes involved in lysosome biogenesis and function, and regulation of autophagy. TFEB is activated in response to nutrient deprivation, stimulating translocation to the nucleus where it forms homo- or heterooligomers with other members of the microphthalmia transcription factor (MiTF) subfamily and resulting in up-regulation of autophagosomes and lysosomes. Recently, it has been shown that TFEB is a component of mammalian target of rapamycin (mTOR) complex 1 (mTORC1), which regulates the phosphorylation and nuclear translocation of TFEB in response to cellular starvation and stress. During normal growth conditions, TFEB is phosphorylated at Ser211 in an mTORC1-dependent manner. Phosphorylation promotes association of TFEB with 14-3-3 family proteins and retention in the cytosol. Inhibition of mTORC1 results in a loss of TFEB phosphorylation, dissociation of the TFEB/14-3-3 complex, and rapid transport of TFEB to the nucleus where it increases transcription of CLEAR and autophagy genes. TFEB has also been shown to be activated in a nutrient-dependent manner by p42 MAP kinase (Erk2). TFEB is phosphorylated at Ser142 by Erk2 in response to nutrient deprivation, resulting in nuclear localization and activation, and indicating that pathways other than mTOR contribute to nutrient sensing via TFEB.

Recommended Dilution

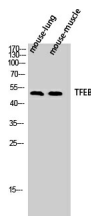
WB: 1: 500 - 1: 2000

IHC: 1: 100 - 1: 300

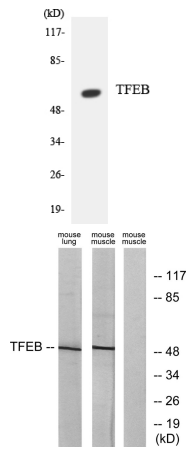
ELISA: 1: 20000

Not yet tested in other applications.

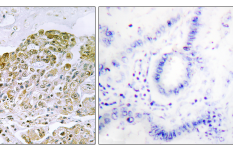
Images



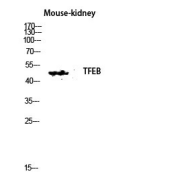
Western Blot analysis of mouse-lung mouse-muscle cells using TFEB Polyclonal Antibody diluted at 1:500



Western blot analysis of the lysates from Jurkat cells using TFEB antibody.



Western blot analysis of lysates from mouse lung and mouse muscle cells, using TFEB Antibody. The lane on the right is blocked with the synthesized peptide.



Immunohistochemistry analysis of paraffin-embedded human lung carcinoma tissue, using TFEB Antibody. The picture on the right is blocked with the synthesized peptide.

Western blot analysis of Mouse-kidney lysis using TFEB antibody. Antibody was diluted at 1:500

Storage

-20°C for one year

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