

TFEB polyclonal antibody

Catalog: BS5963

Host: Rabbit

Reactivity: Human,Rat,Mouse

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 upregulated 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 upregulation 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.

Product:

Rabbit IgG, 1mg/ml in PBS with 0.02% sodium azide,

50% glycerol, pH7.2.

Molecular Weight:

~ 55 kDa

Swiss-Prot:

P19484

Purification&Purity:

The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen and the purity is > 95% (by SDS-PAGE).

Applications:

WB: 1:500~1:1000

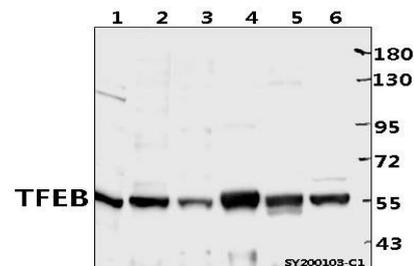
Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

Specificity:

TFEB polyclonal antibody detects endogenous levels of TFEB protein.

DATA:



Western blot (WB) analysis of TFEB polyclonal antibody at 1:500 dilution

Lane1:Hela whole cell lysate(40ug)

Lane2:SGC7901 whole cell lysate(40ug)

Lane3:SHSY5Y whole cell lysate(40ug)

Lane4:The Brain tissue lysate of Mouse(40ug)

Lane5:C6 whole cell lysate(40ug)

Lane6:HEK293T whole cell lysate(40ug)

Note:

For research use only, not for use in diagnostic procedure.

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