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Product Information

Anti-TFE3 antibody, Mouse monoclonal
Clone TFE3-37, purified from hybridoma cell culture

Product Number **SAB4200824**

Product Description

Monoclonal Anti-TFE3 (mouse IgG1 isotype) is derived from the TFE3-37 hybridoma, produced by the fusion of mouse myeloma cells and splenocytes from a mouse immunized with C-terminal region of human TFE3 (GeneID 7030), conjugated to KLH. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents (Product Number ISO2). The antibody is purified from culture supernatant of hybridoma cells.

Anti-TFE3 antibody specifically recognizes TFE3 from human, mouse, rat, bovine, and canine origin. The antibody may be used in various immunochemical techniques including immunoblotting (~60 kDa). Detection of the TFE3 band by Immunoblotting is specifically inhibited by the immunizing peptide.

Transcription factor E3 (TFE3), also known as Class E basic helix-loop-helix protein 33 (bHLHe33), is a transcriptional activator that mediates the enhancer-promoter interactions. TFE3 belongs to the MiT family of helix-loop-helix leucine zipper transcription factors,[1] it is ubiquitously expressed and can directly associate with DNA as either a homodimer or heterodimer which are formed with two other MiT family members, TFEB or TFEC.[1-2]

TFE3 serves an important role in cell growth, cell proliferation,[3] cellular adaptation to starvation, and cellular response to ER stress.[4] Under nutrient-rich conditions, TFE3 is located in the cytoplasm, and under starvation conditions or treatment with ER stressors, TFE3 rapidly translocates to the nucleus. In the nuclear localization, TFE3 mediates cellular adaptation to stress by simultaneously promoting lysosomal biogenesis, autophagy induction, as well as expression of critical mitochondrial and metabolic regulators.[2,4-6] It been shown that TFE3 also participates in the transcriptional regulation of the innate immune response.[6]

Pathogen infections promote TFE3 nuclear translocation, thus inducing *in vivo* expression of several cytokines and chemokines.[7]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1.5-3 μg/mL is recommended using human A549 cells extract.

Note: In order to obtain best results in different techniques and preparations, it is recommended to determine optimal working concentration by titration test.

References

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5. Sardiello, M. et al., *Science*, **325**, 473-7 (2009).
6. Merrell, K., *Mol. Cell Biol*., **17**, 3335-44 (1997).
7. Pastore, N. et al., *Autophagy*, **12**, 1240-58 (2016).

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