

Store at
-20°C
#67864

Phospho-4E-BP1 (Thr37/46) Matched Antibody Pair



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Species Cross Reactivity: H
UniProt ID: #Q13541
Entrez-Gene Id: #1978

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For Research Use Only. Not for Use in Diagnostic Procedures.

Product Includes	Product #	Quantity	Isotype/Source
4E-BP1 (53H11) Rabbit mAb (BSA and Azide Free)	42235	100 µg	Rabbit IgG
Phospho-4E-BP1 (Thr37/46) (236B4) Rabbit mAb (BSA and Azide Free)	39788	100 µg	Rabbit IgG

Description

The Phospho-4E-BP1 (Thr37/46) Matched Antibody Pair is ideal for use with immunoassay technologies and high-throughput ELISA platforms requiring antibody pairs with specialized or custom antibody labeling. Labels include fluorophores, lanthanides, biotin, and beads. Platforms requiring conjugated Matched Antibody Pairs include MSD, Quanterix Simoa, Alpha Technology (AlphaScreen, AlphaLISA, LANCE, HTRF), and Luminex.

Learn how Matched Antibody Pairs move your projects forward, faster at cst-science.com/matched-antibody-pairs.

Specificity/Sensitivity

This kit detects proteins from the indicated species, as determined through in-house testing, but may also detect homologous proteins from other species.

Storage

Store at -20°C. *This product will freeze at -20°C so it is recommended to aliquot into single-use vials to avoid multiple freeze/thaw cycles.* A slight precipitate may be present and can be dissolved by gently vortexing. This will not interfere with antibody performance.

Directions for Use

Matched Antibody Pairs include capture and detection antibodies to non-overlapping epitopes. Optimal dilutions/concentrations should be determined by the end user.

Formulation

Supplied in 1X PBS (10 mM Na₂HPO₄, 3 mM KCl, 2 mM KH₂PO₄, and 140 mM NaCl (pH 7.8)). BSA and Azide Free.

Background

Translation repressor protein 4E-BP1 (also known as PHAS-1) inhibits cap-dependent translation by binding to the translation initiation factor eIF4E. Hyperphosphorylation of 4E-BP1 disrupts this interaction and results in activation of cap-dependent translation (1). Both the PI3 kinase/Akt pathway and FRAP/mTOR kinase regulate 4E-BP1 activity (2,3). Multiple 4E-BP1 residues are phosphorylated *in vivo* (4). While phosphorylation by FRAP/mTOR at Thr37 and Thr46 does not prevent the binding of 4E-BP1 to eIF4E, it is thought to prime 4E-BP1 for subsequent phosphorylation at Ser65 and Thr70 (5).

Background References

1. Pause, A. et al. (1994) *Nature* 371, 762-7.
2. Brunn, G.J. et al. (1997) *Science* 277, 99-101.
3. Gingras, A.C. et al. (1998) *Genes Dev* 12, 502-13.
4. Fadden, P. et al. (1997) *J Biol Chem* 272, 10240-7.
5. Gingras, A.C. et al. (1999) *Genes Dev* 13, 1422-37.

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