10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Phospho-APBB1(S175) Antibody Blocking peptide
Synthetic peptide
Catalog # BP3023a

Specification

Phospho-APBB1(S175) Antibody Blocking peptide - Product Information

Primary Accession O00213

Phospho-APBB1(S175) Antibody Blocking peptide - Additional Information

Gene ID 322

Other Names
Amyloid beta A4 precursor protein-binding family B member 1, Protein Fe65, APBB1, FE65, RIR

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP3023a was selected from the region of human Phospho-APBB1-S175. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Phospho-APBB1(S175) Antibody Blocking peptide - Protein Information

Name APBB1 (HGNC:581)

Function
Transcription coregulator that can have both coactivator and corepressor functions (PubMed:15031292, PubMed:18468999, PubMed:18922798, PubMed:25342469, PubMed:33938178). Adapter protein that forms a transcriptionally active complex with the gamma-secretase- derived amyloid precursor protein (APP) intracellular domain (PubMed:15031292, PubMed:18468999, PubMed:18922798, PubMed:25342469). Plays a

central role in the response to DNA damage by translocating to the nucleus and inducing apoptosis (PubMed:15031292, PubMed:18468999, PubMed:18922798, PubMed:25342469). May act by specifically recognizing and binding histone H2AX phosphorylated on 'Tyr-142' (H2AXY142ph) at double-strand breaks (DSBs), recruiting other pro-apoptosis factors such as MAPK8/JNK1 (PubMed:19234442). Required for histone H4 acetylation at double-strand breaks (DSBs) (PubMed:19234442). Its ability to specifically bind modified histones and chromatin modifying enzymes such as KAT5/TIP60, probably explains its transcription activation activity (PubMed:33938178). Functions in association with TSHZ3, SET and HDAC factors as a transcriptional repressor, that inhibits the expression of CASP4 (PubMed:19343227). Associates with chromatin in a region surrounding the CASP4 transcriptional start site(s) (PubMed:19343227). Involved in hippocampal neurite branching and neuromuscular junction formation, as a result plays a role in spatial memory functioning (By similarity). Plays a role in the maintenance of lens transparency (By similarity). May play a role in muscle cell strength (By similarity). Acts as a molecular adapter that functions in neurite outgrowth by activating the RAC1-ARF6 axis upon insulin treatment (PubMed:36250347).

Cellular Location
Cell membrane. Cytoplasm. Nucleus. Cell projection, growth cone {ECO:0000250|UniProtKB:P46933}. Nucleus speckle. Note=Colocalizes with TSHZ3 in axonal growth cone (By similarity). Colocalizes with TSHZ3 in the nucleus (PubMed:19343227). In normal conditions, it mainly localizes to the cytoplasm, while a small fraction is tethered to the cell membrane via its interaction with APP (PubMed:18468999). Following exposure to DNA damaging agents, it is released from cell membrane and translocates to the nucleus (PubMed:18468999). Nuclear translocation is under the regulation of APP (PubMed:18468999). Colocalizes with NEK6 at the nuclear speckles (PubMed:17512906). Phosphorylation at Ser-610 by SGK1 promotes its localization to the nucleus (By similarity) {ECO:0000250|UniProtKB:P46933, ECO:0000269|PubMed:17512906, ECO:0000269|PubMed:18468999, ECO:0000269|PubMed:19343227}

Tissue Location
Highly expressed in brain; strongly reduced in post-mortem elderly subjects with Alzheimer disease

Phospho-APBB1(S175) Antibody Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

Phospho-APBB1(S175) Antibody Blocking peptide - Images

Phospho-APBB1(S175) Antibody Blocking peptide - Background

APBB1 is a member of the Fe65 protein family. It is an adaptor protein localized in the nucleus. It interacts with the Alzheimer's disease amyloid precursor protein (APP), transcription factor CP2/LSF/LBP1 and the low-density lipoprotein receptor-related protein. APP functions as a cytosolic anchoring site that can prevent the gene product's nuclear translocation. This encoded protein could play an important role in the pathogenesis of Alzheimer's disease. It is thought to regulate transcription. Also it is observed to block cell cycle progression by downregulating thymidylate

synthase expression.

Phospho-APBB1(S175) Antibody Blocking peptide - References

1. Kinoshita, A., et al., J. Biol. Chem. 278(42):41182-41188 (2003). 2. Walsh, D.M., et al., Biochemistry 42(22):6664-6673 (2003). 3. Zhao, Q., et al., Biochemistry 42(12):3627-3634 (2003). 4. Hu, Q., et al., Hum. Mol. Genet. 11(4):465-475 (2002). 5. Bruni, P., et al., J. Biol. Chem. 277(38):35481-35488 (2002).