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KD-Validated Anti-APBB1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1220

Specification

KD-Validated Anti-APBB1 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	O00213
Reactivity	**Human**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 77 kDa, observed, 100 kDa KDa**
Gene Name	**APBB1**
Aliases	**APBB1; Amyloid Beta Precursor Protein Binding Family B Member 1; FE65; RIR; Amyloid Beta (A4) Precursor Protein-Binding, Family B, Member 1 (Fe65); Amyloid-Beta A4 Precursor Protein-Binding Family B Member 1; Adaptor Protein FE65a2; Stat-Like Protein; Protein Fe65; MGC:9072; Fe65**
Immunogen	**A synthesized peptide derived from human FE65**

KD-Validated Anti-APBB1 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**322**

Other Names
Amyloid beta precursor protein binding family B member 1 {ECO:0000312|HGNC:HGNC:581}, Amyloid-beta A4 precursor protein-binding family B member 1, APBB1 (HGNC:581)

KD-Validated Anti-APBB1 Rabbit Monoclonal Antibody - 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:<a

href="http://www.uniprot.org/citations/18922798" target="_blank">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

KD-Validated Anti-APBB1 Rabbit Monoclonal Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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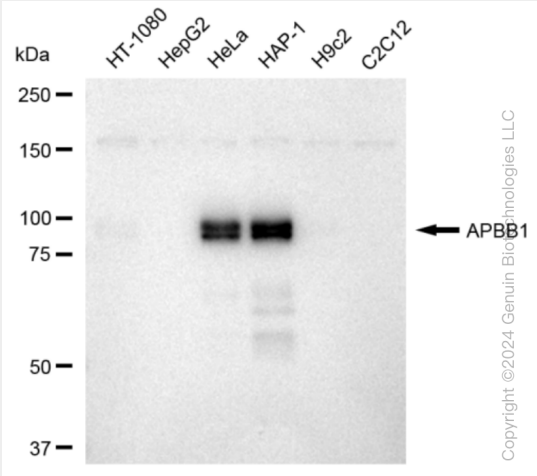
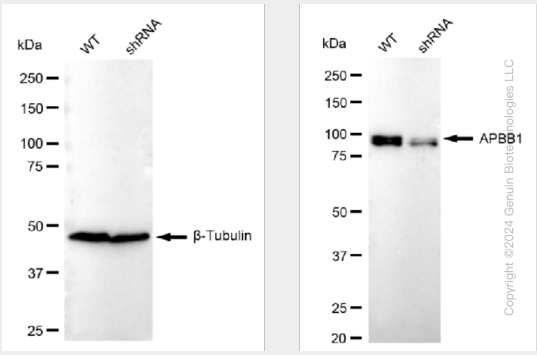
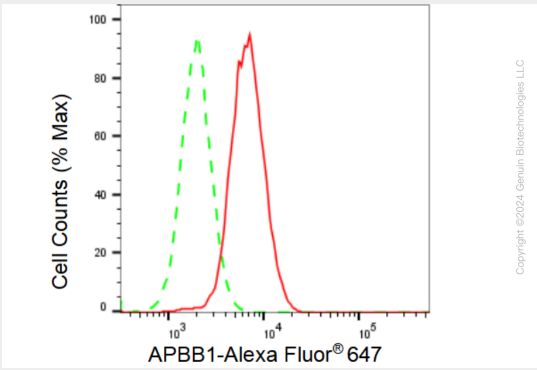
KD-Validated Anti-APBB1 Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-APBB1 antibody (Cat#AGI1220). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-APBB1 antibody (Cat#AGI1220, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-APBB1 antibody (Cat#AGI1220). APBB1 expression in wild type (WT) and APBB1 shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-APBB1 antibody (Cat#AGI1220, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of APBB1 expression in HAP-1 cells using APBB1 antibody (Cat#AGI1220, 1:2,000). Green, isotype control; red, APBB1.

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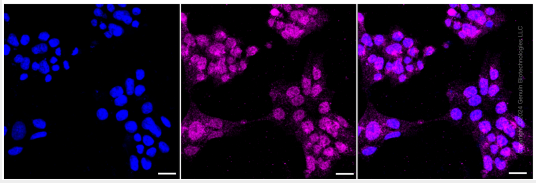

Immunocytochemical staining of HAP-1 cells with APBB1 antibody (Cat#AGI1220, 1:1,000). Nuclei were stained blue with DAPI; APBB1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Low. Scale bar: 20 µm.