# Anti-Beta Amyloid (RABBIT) Antibody - 600-401-253

**Code:** 600-401-253 **Size:** 100 µg

**Product Description:** Anti-Beta Amyloid (RABBIT) Antibody - 600-401-253

**Concentration:** 1.0mg/mL by UV absorbance at 280 nm

**PhysicalState:** Liquid (sterile filtered)

| | |
|---|---|
| **Label** | Unconjugated |
| **Host** | Rabbit |
| **Gene Name** | APP |
| **Species Reactivity** | human, mouse |
| **Buffer** | 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 |
| **Stabilizer** | None |
| **Preservative** | 0.01% (w/v) Sodium Azide |
| **Storage Condition** | Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use. |
| **Synonyms** | Beta amyloid, A-beta |
| **Application Note** | Affinity purified anti-beta amyloid detects beta amyloid in ELISA, IHC and IF. A 40-50 kD band consistent with a higher MW precursor is detected in western blot using whole tissue extracts from mouse brain. In general, we recommend the use of 4% PFA for paraffin embedded tissues and 10% formalin for frozen tissue for fixation. |
| **Background** | Beta amyloid, often abbreviated as A-beta, is a protein that builds up in the brains of persons with Alzheimer's disease, collecting in clumps called plaques or senile plaques. While some researchers question whether beta amyloid is the cause of the dementia, most agree that it is involved in the disruption of thinking that is a hallmark of the disease. In some cases of familial Alzheimer's disease, mutations in genes for the proteins called the presenilins lead to increased production of amyloid. Researchers have been looking at how presenilin-1 in particular contributes to the excess buildup of beta amyloid. Presenilin-1 apparently acts to increase the activity of gamma-secretase, an enzyme that changes a normal protein (amyloid precursor protein or APP) into beta amyloid itself. Furthermore, presenilin-1 might be gamma-secretase. |
| **Purity And Specificity** | This affinity-purified antibody is directed against the amino terminal end of beta amyloid and is useful in determining its presence in various assays. Polyclonal anti-beta amyloid detects human and mouse beta amyloid. Cross reactivity with beta amyloid from other species is likely but has not been determined. |
| **Assay Dilutions** | User Optimized |
| **ELISA** | 1:10,000 - 1:30,000 |
| **Immunohistochemistry** | 1:50-1:200 |
| **WESTERN BLOT** | 1:1,000-1:5000 |
| **IHC** | 1:50-1:200 |
| **IFMICROSCOPY** | 1:50-1:200 |
| **OTHER ASSAYS** | User Optimized |
| **Expiration** | Expiration date is one (1) year from date of opening. |
| **Immunogen** | This antibody was affinity purified from whole rabbit serum prepared by repeated immunizations with a synthetic peptide corresponding to the amino terminus (aa 1-14) of human beta amyloid conjugated to KLH using maleimide. |
| **General Reference** | N-terminal EFRH sequence of Alzheimer's beta-amyloid peptide represents the epitope of its anti-aggregating antibodies. (Frenkel D; J Neuroimmunol, 1998 Aug 1)<br><br>Activation of nuclear factor-kappa B by beta-amyloid peptides and interferon-gamma in murine microglia. (Bonaiuto C; J Neuroimmunol, 1997 Jul) (Luo Y; Neurosci Lett, 1996 Oct 18)<br><br>Alzheimer's beta-amyloid peptides induce inflammatory cascade in human vascular cells: the roles of cytokines and CD40. (Suo Z; Brain Res, 1998 Oct 5) |

**Related Products**

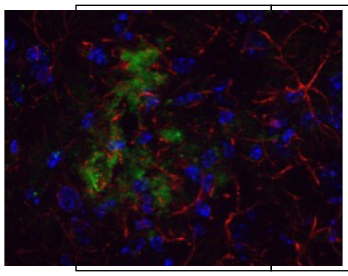
| | |
|---|---|
| 200-401-984 | Anti-Beta-site APP-Cleaving Enzyme (BACE/Asp2) (RABBIT) Antibody - 200-401-984 |
| 610-4302 | Anti-MOUSE IgG (H&L) (RABBIT) Antibody Peroxidase Conjugated - 610-4302 |
| 611-1302 | Anti-RABBIT IgG (H&L) (GOAT) Antibody Peroxidase Conjugated - 611-1302 |
| B501-0500 | BLOTTO Immunoanalytical Grade (Non-Fat Dry Milk) - B501-0500 |

**Related Links**

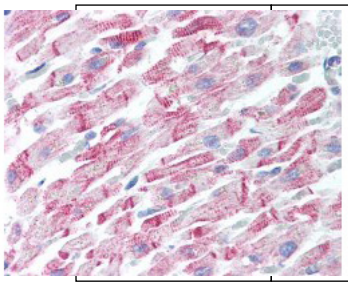
| | |
|---|---|
| UniProtKB - P05067 | http://www.uniprot.org/uniprot/P05067 |
| GeneID - 351 | http://www.ncbi.nlm.nih.gov/sites/entrez?db=gene&term=351 |
| NCBI - NP_000475.1 | http://www.ncbi.nlm.nih.gov/protein/NP_000475.1 |
| NCBI - P05067.3 | http://www.ncbi.nlm.nih.gov/protein/P05067.3 |
| UniProt - P05067 | http://www.uniprot.org/uniprot/P05067 |
| GeneID - 351 | http://www.ncbi.nlm.nih.gov/gene/351 |

**Images**

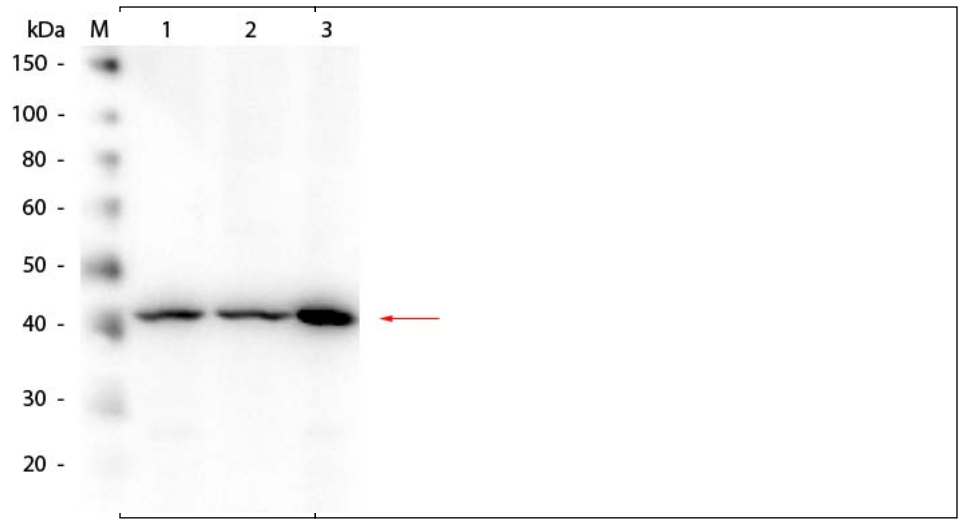
1 Immunohistochemistical detection of beta Amyloid using Anti-Beta Amyloid Antibody on TG APP23 mouse brain cortex frozen sections. Anti-Beta Amyloid Antibody used at 1/200 and incubated for 2 hours in TBS/BSA/Tween/azide. Fluorescent labelled anti rabbit IgG was then added. Carl Hobbs, King`s College London, United Kingdom



2 Human Heart (formalin-fixed, paraffin-embedded) stained with Anti-Beta Amyloid Antibody at 5 ug/ml followed by biotinylated goat anti-rabbit IgG secondary antibody, alkaline phosphatase-streptavidin and chromogen.

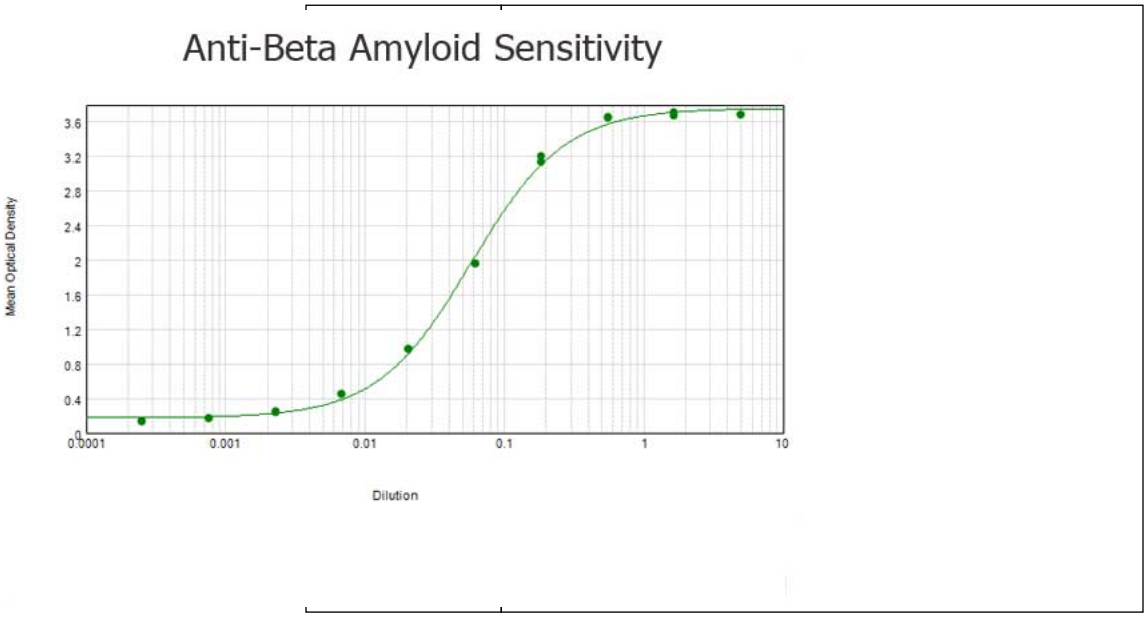


3 Western Blot of Rabbit anti-Beta Amyloid Antibody. Lane 1: HEK293 WCL. Lane 2: Mouse Brain WCL.Lane 3: A-172 WCL. Load: 10.0 µg per lane.Primary antibody: Beta Amyloid Antibody at 1:1,000 overnight at 4°C.Secondary antibody: Peroxidase Conjugated Goat-a-Rabbit IgG (p/n 611-103-122) at 1:40,000 for 30 min at RT.Block: MB-070 for 30 min at RT.Predicted/Observed size: 40 kDa, 40 kDa for Beta Amyloid.



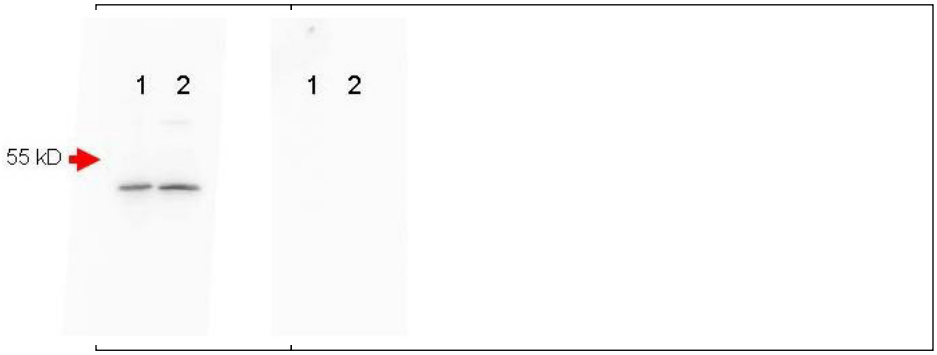

4

ELISA results of purified Rabbit anti-Beta Amyloid Antibody tested against BSA-conjugated peptide of immunizing peptide. Each well was coated in duplicate with 0.1µg of conjugate. The starting dilution of antibody was 5µg/ml and the X-axis represents the Log10 of a 3-fold dilution. This titration is a 4-parameter curve fit where the IC50 is defined as the titer of the antibody. Assay performed using 3% fish gel, Goat anti-Rabbit IgG Antibody Peroxidase Conjugated (Min X Bv Ch Gt GP Ham Hs Hu Ms Rt & Sh Serum Proteins) (p/n 611-103-122) and TMB ELISA Peroxidase Substrate (p/n TMBE-1000).

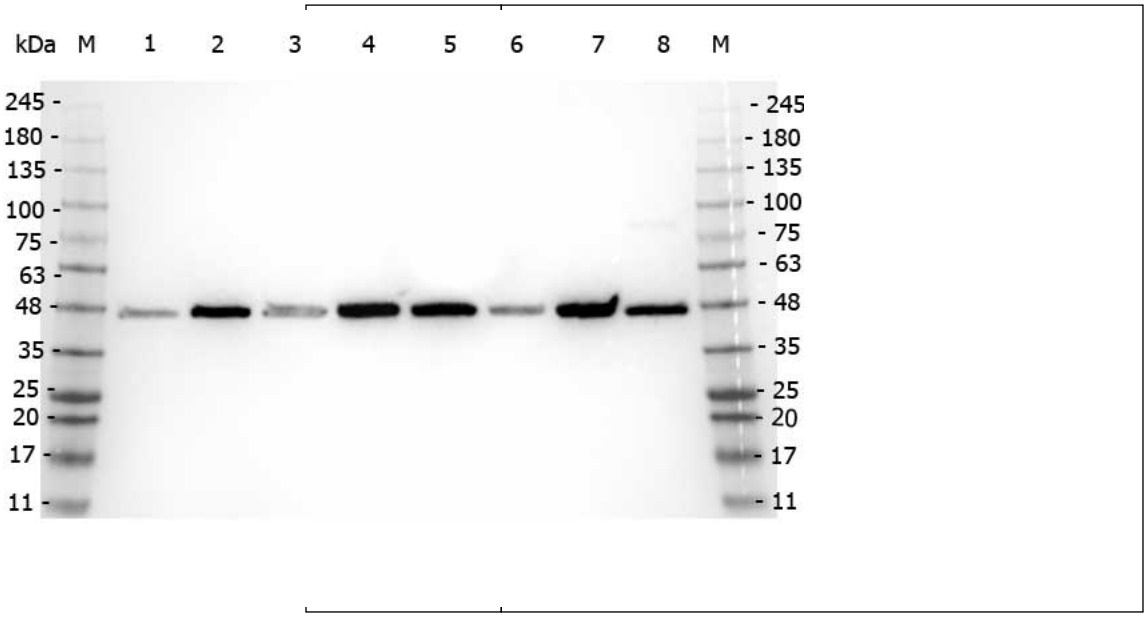



5

Mouse Brain (Lane 1) and Mouse Spinal Chord (Lane 2) were run on a 4-20% gradient gel, Blocked in 1% BSA-TBS-T 30 min RT and probed with Rb-a-Beta Amyloid 1:1000 in 1% BSA-TBS-T o/n 4°C. HRP Gt-a-Rb 611-103-122 Lot#21231 1:40,000 in MB-070 30 min RT. FEMTOMAX chemiluminescent substrate was used for detection of a 40-50 kD band consistent with a higher MW precursor form of beta amyloid. A secondary Ab only control (Shown right) showed no detectable signal.



| | | |
|---|---|---|
| 6 | | Western Blot of Rabbit anti-Beta Amyloid antibody. Marker: Opal Pre-stained ladder (p/n MB-210-0500). Lane 1: HEK293 lysate (p/n W09-000-365). Lane 2: HeLa Lysate (p/n W09-000-363).Lane 3: MCF-7 Lysate (p/n W09-000-360).Lane 4: Jurkat Lysate (p/n W09-000-370).Lane 5: A431 Lysate (p/n W09-000-361).Lane 6: LNCaP Lysate (p/n W09-001-GJ9).Lane 7: A-172 Lysate (p/n W09-001-GL5).Lane 8: NIH/3T3 Lysate (p/n W10-000-358). Load: 35 µg per lane.Primary antibody: Beta Amyloid antibody at 1:5,000 for overnight at 4°C.Secondary antibody: Peroxidase rabbit secondary antibody at 1:30,000 for 60 min at RT.Blocking Buffer: 1% Casein-TTBS for 30 min at RT.Predicted/Observed size: 40 kDa, 40 kDa for AHA1. Other band(s): N/A. |




**Disclaimer**

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.