abcam

ab277127

Anti-BACE1 antibody [027] - BSA and Azide free

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human BACE1 aa 1 to C-terminus. The exact immunogen used to generate this antibody is proprietary information. Database link P56817
Carrier free	Yes
Clone number	027
Purification technique	Affinity purification Protein A

Reactivity data

ICC

Tested

Species	Human
Dilution info	1/20 - 1/100
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/25 - 1/100
Notes	-

Target data

See full target information BACE1

Function	Responsible for the proteolytic processing of the amyloid precursor protein (APP). Cleaves at the N-terminus of the A-beta peptide sequence, between residues 671 and 672 of APP, leads to the generation and extracellular release of beta-cleaved soluble APP, and a corresponding cell-associated C-terminal fragment which is later released by gamma-secretase (PubMed:10656250, PubMed:10677483, PubMed:20354142). Cleaves CHL1 (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	BACE1 also known as beta-site APP cleaving enzyme 1 or beta-secretase plays an important role in the cleavage of amyloid precursor protein (APP). This cleavage results in the production of amyloid-beta peptides which are associated with Alzheimer's disease. BACE1 is a membrane-bound aspartic protease and has a molecular weight of approximately 50100 Da. The enzyme expresses mostly in the brain's neurons and some secretory tissues.
Biological function summary	BACE1 initiates the amyloidogenic pathway of APP processing which involves amyloid-beta generation. BACE1 doesn't function alone but acts as part of a complex that aids in protein substrate recognition and processing. Its activity contributes to physiological processes like myelination and axonal guidance indicating its importance beyond amyloid production.

Pathways	BACE1 is integral to the amyloidogenic pathway which is important in Alzheimer's disease development. It interacts with proteins such as presenilin 1 a part of the gamma-secretase complex that further processes the amyloid-beta precursor. Furthermore BACE1 links to synaptic functions and neural signaling pathways highlighting its multifaceted roles.
Associated diseases and disorders	BACE1 holds significance in Alzheimer's disease due to its role in amyloid-beta peptide production. This connection has led to the development of BACE1 inhibitors as potential therapeutic agents. Additionally BACE1's involvement in other neural functions ties it to cognitive impairments. It also relates to APP through its function in Alzheimer's suggesting targeted strategies for treatment could involve modulating BACE1 activity.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

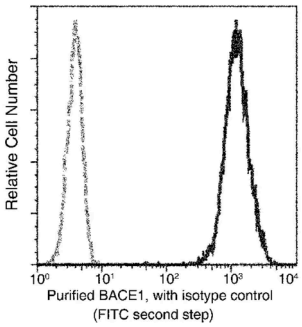
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

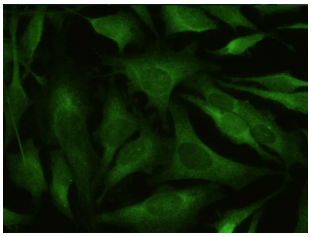
2 product images



Flow Cytometry (Intracellular) - Anti-BACE1 antibody [027] - BSA and Azide free (ab277127)

BACE1 Flow Cytometry (Intracellular) staining using rabbit Anti-BACE1 antibody

Intracellular flow cytometric analysis of BACE1 expression on Jurkat (human T cell leukemia cell line from peripheral blood) cells. The cells were stained with ab277127 at 1/25 dilution, then a FITC-conjugated second step antibody (Black). Cells were also stained with an isotype control (Grey). The Fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact cells.



Immunocytochemistry - Anti-BACE1 antibody [027] - BSA and Azide free (ab277127)

BACE1 Immunocytochemistry staining using rabbit Anti-BACE1 antibody

Immunofluorescence staining of BACE1 in HeLa (human epithelial cell line from cervix adenocarcinoma) cells. Cells were fixed with 4% PFA, permeabilized with 1% Triton X-100 in PBS, blocked with 10% serum, and incubated with ab277127 at 1/60 dilution at 37°C for 1 hour. Then cells were stained with the AlexaFluor® 488-conjugated Goat Anti-rabbit IgG secondary antibody (green) and counterstained with DAPI (blue).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.