

Recombinant Mouse Ap2b1 Protein, Myc/DDK-tagged

Cat. No. Ap2b1-1653M Lot. No. (See product label)

SPECIFICATION

Product Overview Purified recombinant protein of mouse full-length adaptor-related protein complex 2, beta 1 subunit (Ap2b1), with C-terminal MYC/DDK tag, expressed in HEK293T cells.

Species Mouse

Source HEK293

Description

Component of the adaptor protein complex 2 (AP-2). Adaptor protein complexes function in protein transport via transport vesicles in different membrane traffic pathways. Adaptor protein complexes are vesicle coat components and appear to be involved in cargo selection and vesicle formation. AP-2 is involved in clathrin-dependent endocytosis in which cargo proteins are incorporated into vesicles surrounded by clathrin (clathrin-coated vesicles, CCVs) which are destined for fusion with the early endosome. The clathrin lattice serves as a mechanical scaffold but is itself unable to bind directly to membrane components. Clathrin-associated adaptor protein (AP) complexes which can bind directly to both the clathrin lattice and to the lipid and protein components of membranes are considered to be the major clathrin adaptors contributing the CCV formation. AP-2 also serves as a cargo receptor to selectively sort the membrane proteins involved in receptor-mediated endocytosis. AP-2 seems to play a role in the recycling of synaptic vesicle membranes from the presynaptic surface. AP-2 recognizes Y-X-X-[FILMV] (Y-X-X-Phi) and [ED]-X-X-X-L-[LI] endocytosis signal motifs within the cytosolic tails of transmembrane cargo molecules. AP-2 may also play a role in maintaining normal post-endocytic trafficking through the ARF6-regulated, non-clathrin pathway. During long-term potentiation in

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

hippocampal neurons, AP-2 is responsible for the endocytosis of ADAM10. The AP-2 beta subunit acts via its C-terminal appendage domain as a scaffolding platform for endocytic accessory proteins; at least some clathrin-associated sorting proteins (CLASPs) are recognized by their [DE]-X(1,2)-F-X-X-[FL]-X-X-X-R motif. The AP-2 beta subunit binds to clathrin heavy chain, promoting clathrin lattice assembly; clathrin displaces at least some CLASPs from AP2B1 which probably then can be positioned for further coat assembly.

Molecular Mass	105.7 kDa
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Ap2b1 adaptor-related protein complex 2, beta 1 subunit [<i>Mus musculus</i> (house mouse)]
Official Symbol	Ap2b1
Synonyms	AP2B1; adaptor-related protein complex 2, beta 1 subunit; AP-2 complex subunit beta; AP105B; beta-adaptin; beta2-adaptin; beta-2-adaptin; adaptor protein complex AP-2 subunit beta; adapter-related protein complex 2 beta subunit; clathrin assembly

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protein complex 2 beta large chain; plasma membrane adaptor HA2/AP2 adaptin beta subunit; A1788979; 1300012O03Rik

Gene ID 71770

mRNA Refseq NM_001035854

Protein Refseq NP_001030931

UniProt ID Q9DBG3

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