ARG42698
anti-ACACB / Acetyl Coenzyme A Carboxylase 2 antibody

Package: 50 µg
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes ACACB / Acetyl Coenzyme A Carboxylase 2
Tested Reactivity	Hu, Ms, Rat
Tested Application	FACS, IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	Acetyl-CoA Carboxylase Beta
Species	Human
Immunogen	Synthetic peptide corresponding to a sequence of Human ACACB / Acetyl Coenzyme A Carboxylase 2. (EENPEVAVDCVIYLSQHISPAERAQVVHLLSTMD)
Conjugation	Un-conjugated
Alternate Names	Acetyl-CoA carboxylase 2; ACC-beta; HACC275; EC 6.4.1.2; EC 6.3.4.14; ACCB; ACC2

Application Instructions

Application table

Application	Dilution
FACS	1:150 - 1:500
IHC-P	1:200 - 1:1000
WB	1:500 - 1:2000

Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.
Observed Size	~ 280 kDa

Properties

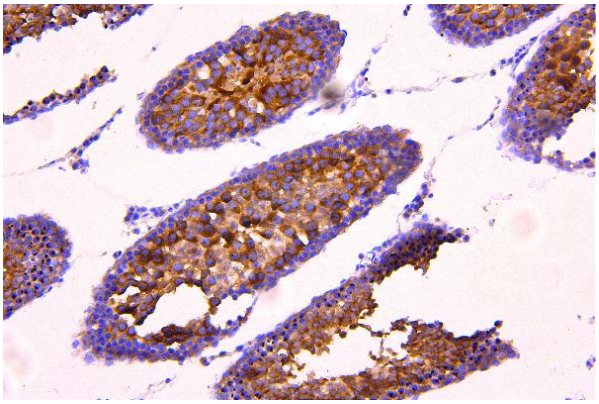
Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	0.2% Na2HPO4, 0.9% NaCl, 0.05% Sodium azide and 4% Trehalose.
Preservative	0.05% Sodium azide
Stabilizer	4% Trehalose
Concentration	0.5 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

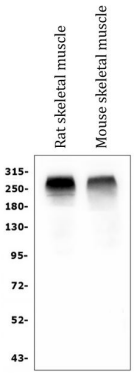
Gene Symbol	ACACB
Gene Full Name	acetyl-CoA carboxylase beta
Background	Acetyl-CoA carboxylase (ACC) is a complex multifunctional enzyme system. ACC is a biotin-containing enzyme which catalyzes the carboxylation of acetyl-CoA to malonyl-CoA, the rate-limiting step in fatty acid synthesis. ACC-beta is thought to control fatty acid oxidation by means of the ability of malonyl-CoA to inhibit carnitine-palmitoyl-CoA transferase I, the rate-limiting step in fatty acid uptake and oxidation by mitochondria. ACC-beta may be involved in the regulation of fatty acid oxidation, rather than fatty acid biosynthesis. There is evidence for the presence of two ACC-beta isoforms. [provided by RefSeq, Jul 2008]
Function	Mitochondrial enzyme that catalyzes the carboxylation of acetyl-CoA to malonyl-CoA and plays a central role in fatty acid metabolism (PubMed:16854592, PubMed:19236960, PubMed:20457939, PubMed:20952656, PubMed:19900410, PubMed:26976583). Catalyzes a 2 steps reaction starting with the ATP-dependent carboxylation of the biotin carried by the biotin carboxyl carrier (BCC) domain followed by the transfer of the carboxyl group from carboxylated biotin to acetyl-CoA (PubMed:19236960, PubMed:20457939, PubMed:20952656, PubMed:26976583). Through the production of malonyl-CoA that allosterically inhibits carnitine palmitoyltransferase 1 at the mitochondria, negatively regulates fatty acid oxidation (By similarity). Together with its cytosolic isozyme ACACA, which is involved in de novo fatty acid biosynthesis, promotes lipid storage (By similarity). [UniProt]
Calculated Mw	277 kDa
PTM	Phosphorylated by AMPK, leading to inactivation of the enzyme. Required for the maintenance of skeletal muscle lipid and glucose homeostasis (By similarity). [UniProt]
Cellular Localization	Mitochondrion. Nucleus. Endomembrane system. Note=May associate with membranes. [UniProt]

Images



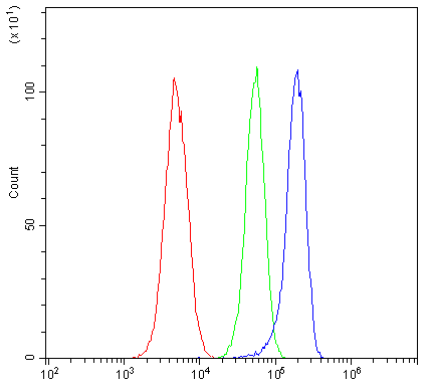
ARG42698 anti-ACACB / Acetyl Coenzyme A Carboxylase 2 antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Rat testis tissue. Antigen Retrieval: Heat mediation was performed in EDTA buffer (pH 8.0). The tissue section was blocked with 10% goat serum. The tissue section was then stained with ARG42698 anti-ACACB / Acetyl Coenzyme A Carboxylase 2 antibody at 1 µg/ml dilution, overnight at 4°C.



ARG42698 anti-ACACB / Acetyl Coenzyme A Carboxylase 2 antibody WB image

Western blot: 50 µg of samples under reducing condition. Rat skeletal muscle and Mouse skeletal muscle lysates stained with ARG42698 anti-ACACB / Acetyl Coenzyme A Carboxylase 2 antibody at 0.5 µg/ml dilution, overnight at 4°C.



ARG42698 anti-ACACB / Acetyl Coenzyme A Carboxylase 2 antibody FACS image

Flow Cytometry: HL-60 cells were blocked with 10% normal goat serum and then stained with ARG42698 anti-ACACB / Acetyl Coenzyme A Carboxylase 2 antibody (blue) at 1 µg/10^6 cells for 30 min at 20°C, followed by incubation with DyLight®488 labelled secondary antibody. Isotype control antibody (green) was rabbit IgG (1 µg/10^6 cells) used under the same conditions. Unlabelled sample (red) was also used as a control.