abcam

ab314186

Anti-beta Casein antibody [29D6]

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine), 0.88% Sodium chloride
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human CSN2. Database link P05814
Clone number	29D6
Purification technique	Affinity purification
Concentration	1.2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/200
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/50 - 1/200
Notes	-

Target data

See full target information CSN2

Function	Important role in determination of the surface properties of the casein micelles.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

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

Activity summary	Beta-casein is a major component of milk proteins known also simply as casein or beta-casein protein. This protein plays an important structural role in forming micelles which ensures efficient transport and digestion of calcium and phosphate in milk. Beta-casein has a molecular weight of about 24 kDa. It is primarily expressed in the mammary gland produced during lactation. Analyzing beta-casein often involves techniques like casein SDS PAGE which helps in confirming its molecular mass and purity.
Biological function summary	Beta-casein is involved in both nutritional and protective functions. In the mammary gland it is part of the casein micelle complex which includes other caseins like alpha-casein and kappa-casein. These micelles improve the stability and solubility of milk proteins. Beta-casein's phosphorylation allows binding with calcium ions supporting skeletal development. This function is significant in neonatal growth as casein protein delivers amino acids critical for development.
Pathways	Beta-casein functions within pathways related to calcium transport and absorption. It interacts with proteins involved in the signaling pathways such as osteopontin enhancing mineral absorption. In milk production processes beta-casein supports micelle assembly and stabilization forming complexes that incorporate other milk proteins. These interactions are essential in ensuring the proper delivery of nutrients and minerals to developing offspring.
Associated diseases and disorders	Beta-casein may play a role in dairy-related sensitivities and certain metabolic disorders. Some studies suggest its A1 variant could be linked to digestive discomfort in lactose-intolerant individuals. Beta-casein's protein fragments such as beta-casomorphin are also under investigation for links to conditions like type 1 diabetes. In these contexts beta-casein's interaction with proteins involved in immune response might influence disease progression.

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

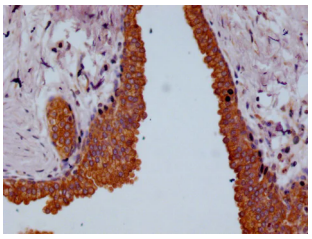
We do not recommend this combination. It is not covered by our product promise.

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.

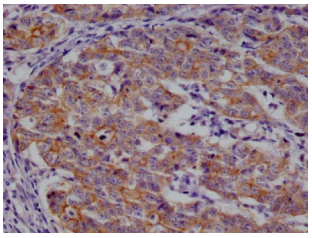
Full details and terms and conditions can be found here:
Terms & Conditions.

3 product images



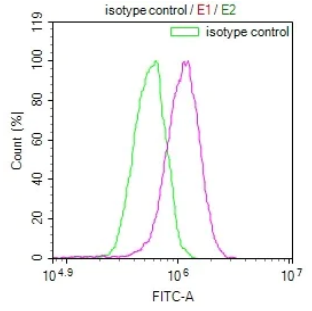
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-beta Casein antibody [29D6] (ab314186)

Immunohistochemical analysis of ab314186 diluted at 1:100 and staining in paraffin-embedded human prostate cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit polymer IgG labeled by HRP and visualized using 0.05% DAB.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-beta Casein antibody [29D6] (ab314186)

Immunohistochemical analysis of ab314186 diluted at 1:100 and staining in paraffin-embedded human colon cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit polymer IgG labeled by HRP and visualized using 0.05% DAB.



Flow Cytometry - Anti-beta Casein antibody [29D6] (ab314186)

Beta Casein Flow Cytometry staining of HepG2 cells using rabbit Anti-beta Casein antibody

Overlay Peak curve showing HepG2 (Human liver hepatocellular carcinoma cell line) cells stained with ab314186 (pink line) at 1:100. The cells were incubated in 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (1ug/1x10E6 cells) for 45min at 4°C. The secondary antibody used was FITC-conjugated Goat Anti-rabbit IgG (H+L) at 1:200 dilution for 35min at 4°C. Control antibody (green line) was rabbit IgG (1ug/1x10E6 cells) used under the same conditions. Acquisition of >10,000 events was performed.

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