abcam

ab167477

Anti-CEACAM16 antibody [SU-9D5]

Key facts

Isotype	IgG2b
Host species	Mouse
Storage buffer	pH: 7.2 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	SU-9D5
Purification technique	Affinity purification Protein G
Concentration	2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	ab167477 was purified by protein G affinity chromatography from cell culture supernatants and verified by SDS-PAGE.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1.2 µg for 10^6 Cells

Notes	ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	4 µg/mL
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information CEACAM16

Function	Required for proper hearing, plays a role in maintaining the integrity of the tectorial membrane.

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

Supplementary info

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

Activity summary	CEACAM16 also known as Carcinoembryonic Antigen-Related Cell Adhesion Molecule 16 has a significant role in the auditory system. The protein has a mass approximately of 48 kDa and it is expressed mainly in the inner ear specifically within the cochlear and vestibular systems. CEACAM16 localizes at the tectorial membrane and is part of the structure involved in sensory hair cell function. Its expression is essential for the proper organization and mechanics of the tectorial membrane which contributes to sound perception.
Biological function summary	CEACAM16 interacts with other proteins to maintain auditory function. It is part of a complex that includes tectorial membrane proteins like TECTA (alpha-tectorin) and OTOA (otoancorin). CEACAM16 supports the structural integrity of the tectorial membrane facilitating the transmission of sound-induced vibrations to sensory hair cells. This interaction is critical for the proper mechanotransduction processes essential for hearing.
Pathways	CEACAM16 plays a role in hearing-related molecular pathways. It interacts within the mechanotransduction pathway which is important for converting mechanical sound stimuli into electrical signals in the ear. CEACAM16 also relates to pathways concerning extracellular matrix organization as it helps to maintain the tectorial membrane structure. Proteins such as collagen and other tectorial membrane components like TECTA and TECTB (beta-tectorin) are closely related within these pathways directly influencing auditory transduction efficiency.
Associated diseases and disorders	CEACAM16 mutations or dysfunctions can lead to non-syndromic hearing loss. Mutations affecting CEACAM16 have been linked with autosomal dominant progressive hearing loss known as DFNA4B. This type of hearing impairment often involves mutations impacting the mechanotransduction pathway. Furthermore CEACAM16 has associations with proteins involved in genetic forms of deafness such as TECTA further illustrating its importance in maintaining auditory health.

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.

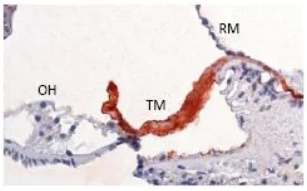
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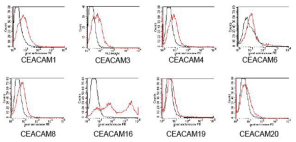
3 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CEACAM16 antibody [SU-9D5] (ab167477)

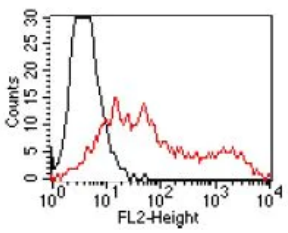
CEACAM16 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-CEACAM16 antibody

Immunohistochemical analysis of paraffin-embedded adult transgenic mouse cochlea tissue with a Human CEACAM16 gene, labeling CEACAM16 with ab167477 at 4 µg/ml. Binding of biotinylated antibody was detected with horseradish peroxidase-coupled streptavidin and stained with 3-amino-9-ethylcarbazole. OH: Outer hair cells, TM: Tectorial membrane, RM: Reissner’ s membrane.



Flow Cytometry - Anti-CEACAM16 antibody [SU-9D5] (ab167477)

BOSC23 cells were transiently transfected with expression vectors containing either the cDNA of CEACAM1, CEACAM3, 4, 6, 8 19, or 20. Expression of the constructs was tested with monoclonal antibodies known to recognize the corresponding proteins (data not shown). An irrelevant monoclonal antibody served as a negative control (black curves). For specificity testing, ab167477 was tested on all CEACAM transfectants at 1.2 µg/10^6 cells. A positive signal was obtained only with CEACAM16 transfected cells (red curve).



Flow Cytometry - Anti-CEACAM16 antibody [SU-9D5] (ab167477)

Flow cytometric analysis of BOSC23 cells transiently transfected with an expression vector encoding either CEACAM16 (red curve) or an irrelevant protein (control transfectant). ab167477 was used at 1.2 µg/10^6 cells and detection was with a PE- conjugated secondary antibody.

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