abcam

ab85022

Anti-TRPV3 antibody [N15/4]

Key facts

Isotype	IgG2a
Host species	Mouse
Storage buffer	Preservative: 0.09% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine)
Form	Liquid
Clonality	Monoclonal
Clone number	N15/4
Purification technique	Affinity purification Protein G
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1 µg for 10^6 Cells
Notes	ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse

Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Cow
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Expected

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

Predicted

Species	Cow
Dilution info	-
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

Predicted

Species	Cow
Dilution info	-
Notes	-

Target data

See full target information Transient receptor potential cation channel subfamily V member 3

Function	Non-selective calcium permeant cation channel (PubMed:12077604, PubMed:12077606, PubMed:26818531, PubMed:37648856, PubMed:38691614). It is activated by innocuous (warm) temperatures and shows an increased response at noxious temperatures greater than 39 degrees Celsius (PubMed:12077604, PubMed:12077606). Activation exhibits an outward rectification (PubMed:12077604). The channel pore can dilate to provide permeability to larger cations (PubMed:37648856). May associate with TRPV1 and may modulate its activity (PubMed:12077606). Is a negative regulator of hair growth and cycling: TRPV3-coupled signaling suppresses keratinocyte proliferation in hair follicles and induces apoptosis and premature hair follicle regression (catagen) (PubMed:21593771).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Storage information	Stable for 12 months at -20°C

Notes

The clone number has been updated from S15-4 to N15/4, both clone numbers name the same antibody clone.

Supplementary info

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

Activity summary	The TRPV3 protein also known as transient receptor potential cation channel subfamily V member 3 functions as a calcium-permeable channel primarily involved in thermoregulation. With a mass of approximately 91 kDa TRPV3 is activated by warm temperatures and certain chemical compounds including natural oils. It is widely expressed in keratinocytes of the skin as well as in sensory neurons and can be found in other tissues like the brain and hair follicles.
Biological function summary	TRPV3 contributes to temperature sensation and pain perception playing an important role in maintaining skin barrier homeostasis. TRPV3 functions as a homotetramer forming a channel that allows the entry of cations into cells. This channel activity regulates various processes including cell proliferation differentiation and survival especially in the skin cells. Mutations or dysregulation in TRPV3 can result in abnormal skin physiology highlighting its function in epidermal biology.
Pathways	TRPV3 interacts closely with the TRP channel family and integrates into the calcium signaling and MAPK signaling pathways. Within these pathways TRPV3 modulates intracellular calcium levels affecting processes like inflammation and pain signaling. It closely associates with other TRP channels such as TRPV1 which is involved in mediating pain and heat sensation providing a coordinated response to environmental changes.
Associated diseases and disorders	TRPV3 is linked to conditions such as Olmsted syndrome and atopic dermatitis both characterized by skin abnormalities. In Olmsted syndrome mutations in TRPV3 disrupt normal calcium influx leading to symptoms like palmoplantar keratoderma. Additionally TRPV3 dysregulation might exacerbate atopic dermatitis possibly through interactions with the protein filaggrin which is important for skin barrier function. Understanding TRPV3's role in these contexts can offer insights into potential therapeutic targets for skin-related disorders.

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

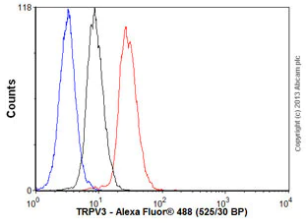
We do not recommend this combination. It is not covered by our product promise.

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.

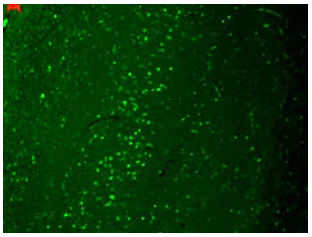
4 product images



Flow Cytometry - Anti-TRPV3 antibody [N15/4] (ab85022)

TRPV3 Flow Cytometry staining using mouse Anti-TRPV3 antibody

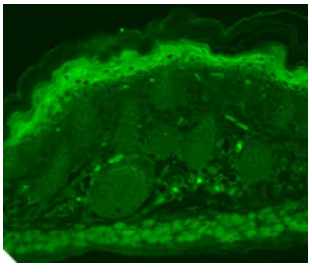
Overlay histogram showing SH-SY5Y cells stained with ab85022 (red line). The cells were fixed with 80% methanol (5 min) and incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab85022, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-mouse IgG (H&L) (ab150113) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2a [ICIGG2A] (ab91361, 1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. Please note that Abcam do not have any data for use of this antibody on non-fixed cells. We welcome any customer feedback.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TRPV3 antibody [N15/4] (ab85022)

TRPV3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-TRPV3 antibody

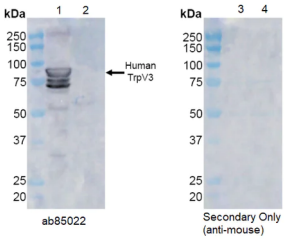
Immunohistochemical analysis of Bouin's Fixative and paraffin-embedded Human hippocampus tissue labelling TrpV3 with ab85022 at 1/1000 dilution (1 hour at RT), followed by FITC Goat Anti-Mouse (green) at 1/50 (1 hour at RT).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TRPV3 antibody [N15/4] (ab85022)

TRPV3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-TRPV3 antibody

Immunohistochemical analysis of Bouin's Fixative and paraffin-embedded Mouse backskin tissue labelling TrpV3 with ab85022 at 1/100 dilution (1 hour at RT), followed by FITC Goat Anti-Mouse (green) at 1/50 (1 hour at RT).



Western blot - Anti-TRPV3 antibody [N15/4] (ab85022)

TRPV3 Western blot staining using mouse Anti-TRPV3 antibody

Western blot analysis using ab85022 showing detection of Human TrpV3 protein in a transient over-expression lysate.
Color Development: Chemiluminescent for HRP (Moss) for 30 sec in RT. Exposed 0.5 seconds.

NOTE: The ORF clone contains a C-term DDK tag; results were confirmed using Anti-DDK antibody showing laddering below target is related to variants or degradation products of the TRPV3 protein.

All lanes:
Western blot - Anti-TRPV3 antibody [N15/4] (ab85022) at 1/1000 dilution

Lanes 1 and 3:
HEK293T over-expression at 5 µg

Lanes 2 and 4:
HEK293T negative control at 5 µg

Secondary

All lanes:
Goat anti-mouse IgG:HRP for 1 hour at RT at 1/5000 dilution

Observed band size: 90 kDa

Exposure time: 2hr

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