

Product datasheet

Anti-KIF5A antibody ab5628

★★★★★ 3 Abreviews 7 References 3 Images

Overview

Product name	Anti-KIF5A antibody
Description	Rabbit polyclonal to KIF5A
Host species	Rabbit
Specificity	This antibody is specific for KIF5A and does not detect other kinesin isoforms.
Tested applications	Suitable for: ICC/IF, IP, WB
Species reactivity	Reacts with: Mouse, Rat, Cow, Human
Immunogen	Synthetic peptide corresponding to Mouse KIF5A aa 1007-1027. Sequence: CGYEAEDQAKLFPLHQETAAS (Peptide available as ab41781) Run BLAST with Run BLAST with
Positive control	Mouse neuronal cell extract.
General notes	This product was previously labelled as Kinesin 5A, Kinesin 5 A + B + C

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 99% PBS
Purity	Immunogen affinity purified
Primary antibody notes	Kinesins are a superfamily of microtubule-associated motor proteins involved in a variety of cellular processes including membranous organelle transport and cell division. Kinesin has been found in a variety of organisms and cell types and is subject to spatial and temporal regulation. These proteins have a modular structure including a conserved motor domain of approximately 350 amino acids, which is responsible for microtubule binding and ATP hydrolysis. In addition to the motor domain, subfamily members share common domain organization, exhibit sequence similarity, motility properties, and cellular functions outside of the motor domain. There are

currently three known Kinesin 5 family members denoted as A, B, and C. Kinesin 5A and kinesin 5C appear to be exclusively neuronal, whereas kinesin 5B appears to be ubiquitous in its expression.

Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab5628** in the following tested applications.

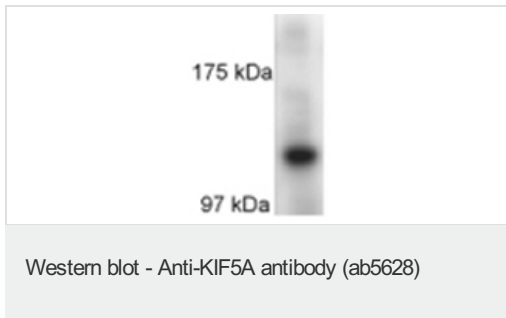
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		Use a concentration of 5 µg/ml.
IP	★★★★★	Use at an assay dependent concentration. PubMed: 20094756
WB	★★★★★	Use a concentration of 0.4 µg/ml. Detects a band of approximately 110 kDa (predicted molecular weight: 117 kDa). Can be blocked with KIF5A peptide (ab41781) .

Target

Function	Microtubule-dependent motor required for slow axonal transport of neurofilament proteins (NFH, NFM and NFL).
Tissue specificity	Distributed throughout the CNS but is highly enriched in subsets of neurons.
Involvement in disease	Defects in KIF5A are the cause of spastic paraplegia autosomal dominant type 10 (SPG10) [MIM:604187]. An inherited degenerative spinal cord disorder characterized by a slow, gradual, progressive weakness and spasticity (stiffness) of the legs. Rate of progression and the severity of symptoms is quite variable. Initial symptoms may include difficulty with balance, weakness and stiffness in the legs, muscle spasms, and dragging the toes when walking. In some forms of the disorder, bladder symptoms (such as incontinence) may appear, or the weakness and stiffness may spread to other parts of the body.
Sequence similarities	Belongs to the kinesin-like protein family. Kinesin subfamily. Contains 1 kinesin-motor domain.
Domain	Composed of three structural domains: a large globular N-terminal domain which is responsible for the motor activity of kinesin (it hydrolyzes ATP and binds microtubule), a central alpha-helical coiled coil domain that mediates the heavy chain dimerization; and a small globular C-terminal domain which interacts with other proteins (such as the kinesin light chains), vesicles and membranous organelles.
Cellular localization	Cytoplasm > perinuclear region. Cytoplasm > cytoskeleton. Concentrated in the cell body of the neurons, particularly in the perinuclear region.

Images



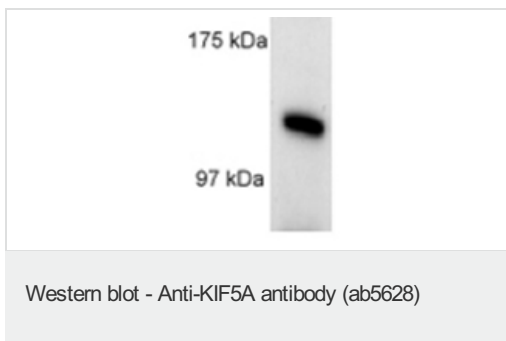
Anti-KIF5A antibody (ab5628) + mouse neuronal cell extract

Secondary

HRP-conjugated anti rabbit antibody

Predicted band size: 117 kDa

Shows a Western blot of KIF5A on mouse neuronal cell extract using ab5628.

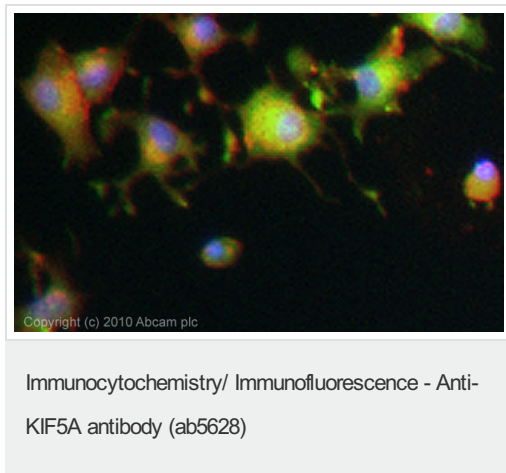


Anti-KIF5A antibody (ab5628) + human retinal extract

Secondary

HRP-conjugated anti-rabbit antibody

Predicted band size: 117 kDa



ICC/IF image of ab5628 stained PC12 cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab5628, 5µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

Our Promise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you

- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors