

Technical Data Sheet

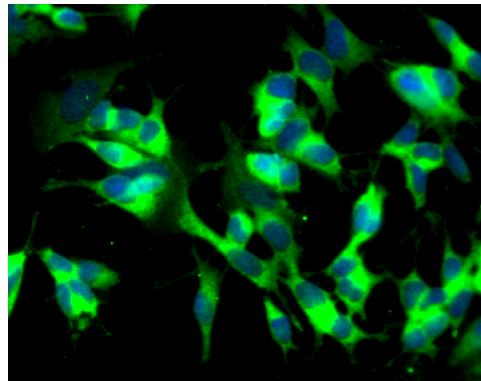
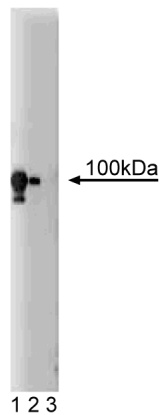
Purified Mouse Anti-KAP3A

Product Information

Material Number:	610637
Alternate Name:	Kinesin superfamily Associated Protein-3
Size:	50 µg
Concentration:	250 µg/ml
Clone:	14/KAP3A
Immunogen:	Mouse KAP3A aa. 612-787
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Mouse, Rat, Dog, Chicken
Target MW:	100 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

KAP3 (kinesin superfamily-associated protein 3) was identified as an accessory protein for the microtubule translocator kinesin and, independently, as SMAP (Smg GDS-associated protein). Alternative splicing of KAP3 mRNA results in proteins of 793 amino acids (KAP3A) and 772 amino acids (KAP3B). KAP3 protein reportedly is highly expressed in brain and testis and displays an apparent molecular weight of 100 kDa. Analysis of its primary structure reveals that KAP3A contains nine repeats of the Arm domain (40 amino acids). This domain is characteristic of the Armadillo family of proteins that includes armadillo, β-catenin, plakoglobin, importin, APC, and pp120. In addition, KAP3/SMAP is a substrate for v-src kinase. Phosphorylation of KAP3/SMAP decreases its association with Smg GDS.



Western blot analysis of KAP3A on a SW13 cell lysate (Human adrenal gland carcinoma; ATCC CCL-105) (left). Lane 1:1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the mouse anti- KAP3A antibody.

Immunofluorescent staining of SH-SY5Y cells (right). Cells were seeded in a 384 well collagen coated Microplates (Material # 353962) at ~ 8,000 cells per well. After overnight incubation, cells were stained using the Triton X100 fix/perm protocol (see Recommended Assay Procedure; Bioimaging protocol link) and the anti-KAP3a antibody. The second step reagent was Alexa Fluor® 488 goat anti mouse Ig (Invitrogen)(pseudo colored green). Cell nuclei were counter stained with Hoechst 33342 (pseudo colored blue). The image was taken on a BD Pathway™ 855 or 435 Bioimager System using a 20x objective and merged using the BD AttoVison™ software. This antibody also stained SK-N-SH, C6, U87 and U373 cells using both the Triton X100 and methanol fix/perm protocols (see Recommended Assay Procedure; Bioimaging protocol link).

Preparation and Storage

Store undiluted at -20°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

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Application Notes

Application

Western blot	Routinely Tested
Immunoprecipitation	Tested During Development
Immunofluorescence	Tested During Development
Bioimaging	Tested During Development
Immunohistochemistry	Not Recommended

Suggested Companion Products

Catalog Number	Name	Size	Clone
611475	SW-13 Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. This antibody has been developed and certified for the bioimaging application. However, a routine bioimaging test is not performed on every lot. Researchers are encouraged to titrate the reagent for optimal performance.
5. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.
6. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
7. Triton is a trademark of the Dow Chemical Company.
8. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Ginkel LM, Wordeman L. Expression and partial characterization of kinesin-related proteins in differentiating and adult skeletal muscle. *Mol Biol Cell.* 2000; 11(12):4143-4158. (Biology: Western blot)

Shimizu K, Kawabe H, Minami S. SMAP, an Smg GDS-associating protein having arm repeats and phosphorylated by Src tyrosine kinase. *J Biol Chem.* 1996; 271(43):27013-27017. (Biology)

Yamazaki H, Nakata T, Okada Y, Hirokawa N. Cloning and characterization of KAP3: a novel kinesin superfamily-associated protein of KIF3A/3B. 1996; 93(16):8443-8448. (Biology)

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