

Datasheet for 100-401-E80S**Kinesin-1 Antibody****Overview**

Description:	Anti-Kinesin-1 (RABBIT) Antibody - 100-401-E80S
Item No.:	100-401-E80S
Size:	25 µL
Applications:	IHC, WB
Reactivity:	Human
Host Species:	Rabbit

Product Details

Background:	Intracellular transport is critical to cellular functions and the maintenance of its integrity (membrane renewal, vesicles trafficking, cell division, mRNA transport, etc.). Among the molecular motors that are involved in intracellular transport, three large superfamilies have been identified and well characterized these last decades – kinesins, dyneins and myosins. Kinesins, also known as KIFs, are microtubule-dependent molecular motors that use ATP as chemical fuel to transport cargo along the microtubule network. Indeed, five major kinesin families were initially described but there are as many as 45 mammalian kinesin genes to date. In most kinesins, the motor domain is found at the N-terminus (N-type). N-type kinesins are (+) end-directed motors, i.e. they transport cargo towards the (+) end of the microtubule. In the neuronal axon, synaptic vesicle precursors, mitochondria and protein complexes are transported bi-directionally. While retrograde transport is powered by dyneins, anterograde transport is essentially powered by kinesins. Deciphering the regulation and functions of kinesins constitutes a major challenge and will broaden our understanding of molecular motors implications in intracellular transport.
Synonyms:	rabbit anti-Kinesin 1 Antibody, Conventional kinesin heavy chain, Ubiquitous kinesin heavy chain, KNS, KNS1, Kinesin-1 heavy chain, UKHC, Anti-Kinesin-1 antibody, kinesin 1 antibody, kin1, kin-1, KIF5, KHC, Kinesin motor domain
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	Antiserum

Target Details

Gene Name:	KIF5B
Reactivity:	Human
Immunogen Type:	Recombinant Protein
Immunogen:	Anti-Kinesin-1 was prepared from whole rabbit serum produced by repeated immunizations with a truncated kinesin-1 construct expressed in E. coli corresponding to human kinesin-1 protein.
Purity/Specificity:	Anti-Kinesin-1 is directed against the human kinesin-1 protein. The product was prepared from monospecific antiserum by delipidation and defibrination. A BLAST analysis was used to suggest reactivity with human. Cross-reactivity with kinesin 1 from other sources have not been determined.
Relevant Links:	• UniProtKB - P33176 • NCBI - NP_004512.1 • GenelD - 3799

Application Details

Tested Applications:	IHC, WB
Application Note:	Kinesin-1 antibody has been tested for use in western blot, and immunohistochemistry. For western blots expect a band of approximately 72 kDa in size corresponding to truncated kinesin-1 protein. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:10000
IHC:	User Optimized
WB:	1:100-1:500

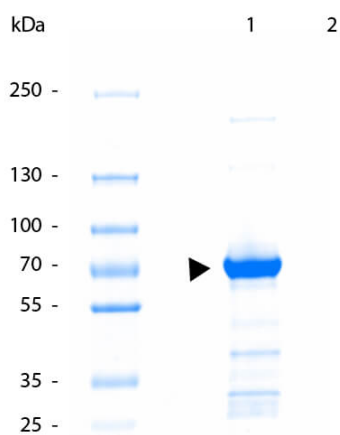
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	77 mg/mL by Refractometry
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

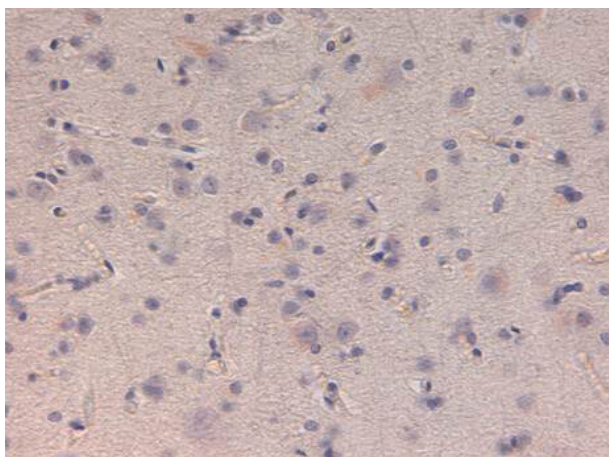
Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



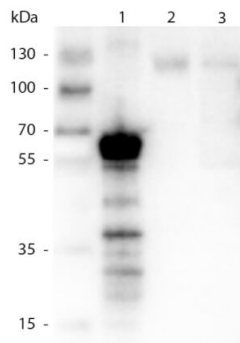
SDS-PAGE

SDS-PAGE of Truncated Kinesin 1 Protein. Lane 1: Truncated Kinesin-1 Protein. Lane 2: none. Load: 5 ug per lane. Block: coomassie blue for 20 min, destain overnight at RT. Predicted/Observed size: 72 kDa, 72kDa for kinesin-1. Other band(s): degradation.



Immunohistochemistry

Immunohistochemistry of Rabbit anti-Kinesin-1. Tissue: Human Brain at 40X at pH 6.

**Western Blot**

Western Blot of Rabbit anti-Kinesin 1 Antibody. Lane 1: 500 ng of truncated kinesin 1 protein. Lane 2: 20 ug of Mouse Brain lysate. Lane 3: 10 ug of Mouse Brain lysate. Primary antibody: kinesin1 antibody at 1:1000 for overnight at 4°C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:40,000 for 1hr at RT. Block: 5% BLOTTO 1 hr at RT. Predicted/Observed size: 72 kDa, ~70 kDa for kinesin-1. Other band(s): degradation.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.