Recombinant Human KIF18A Protein, His-tagged

Cat. No. KIF18A-12H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human KIF18A Protein, fused to His-tag, was expressed in Bacterial expression system.
Species	Human
Source	Bacteria
ProteinLength	1-374 aa
Description	KIF18A is a member of the kinesin superfamily of microtubule-associated molecular motors (see MIM 148760) that use hydrolysis of ATP to produce force and movement along microtubules (Luboshits and Benayahu, 2005 [PubMed 15878648]).[supplied by OMIM, Aug 2008].
Form	It is supplied as a white lyophilized powder.
Bio-activity	Microtubule activated ATPase Assay KIF18A ATPase activity was measured by monitoring real time free phosphate generation using the Kinesin ELIPA Assay Kit. The assay is based upon an absorbance shift (330 nm to 360 nm) that occurs when 2-amino-6-mercapto-7-methylpurine ribonucleoside (MESG) is catalytically converted to 2 -amino-6-mercapto-7-methylpurine in the presence of inorganic phosphate (Pi). One molecule of Pi will yield one molecule of 2- amino-6- mercapto-7-methylpurine in an essentially irreversible reaction. Hence, the absorbance at 360 nm is directly proportional to the amount of Pi generated in the kinesin ATPase reaction. Under the conditions outlined

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	below, the Vmax for KIF18A microtubule-activated ATPase activity is >1500 nmoles ATP generated per minute per mg of KIF18A.
Molecular Mass	44 kDa
Purity	0.8
Storage	The protein is stable for six months if stored at - 70centigrade. Defrosting should be in a room temperature water bath for 3 min then place in ice. Dilution of protein must be done in 100 mM Tris pH 8.0 and 100 mM NaCl buffer. The protein should not be exposed to repeated freeze-thaw cycles. The lyophilized protein is stable at 4centigrade desiccated (
Reconstitution	Before reconstitution, briefly centrifuge to collect the product at the bottom of the tube. The protein should be reconstituted to 5 mg/ml with the addition of 20 µl of nanopure water (100 µg size). When reconstituted, the protein will be in the following buffer: 100 mM Tris pH 8.0, 100 mM NaCl, 2 mM MgCl2, 15% (w/v) sucrose, and 1% (w/v) dextran. In order to maintain high biological activity of the protein, it is strongly recommended that the protein solution be supplemented with DTT to 1 mM final concentration, aliquoted into "experiment-sized" amounts, snap frozen in liquid nitrogen, and stored at -70centigrade.

GENE INFORMATION

Gene Name	KIF18A kinesin family member 18A [Homo sapiens (human)]
Official Symbol	KIF18A
Synonyms	KIF18A; kinesin family member 18A; PPP1R99; MS-KIF18A
Gene ID	81930

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mRNA Refseq	NM_031217.4
Protein Refseq	NP_112494.3
MIM	611271
UniProt ID	Q8NI77

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