

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human RanGAP1 in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human RanGAP1 Asn418-Val587 Accession # P46060
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.	

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

RANGAP-1 (RAN [RAs-related Nuclear protein] GTPase-Activating Protein 1; also Fug1) is a 82-88 kDa member of the RNA1 family of molecules. It is widely expressed, and serves as a regulator of the nuclear regulatory protein RAN. RAN, when bound to GTP, is active, and is involved in the onset and termination of mitosis, plus the import and export of protein into the nucleus. In the cytosol, RAN:GTP is complexed to an Importin: cargo complex. RANGAP-1 converts the RAN-associated GTP into GDP, and this induces dissociation of the complex into RAN:GDP, Importin and cargo. The cargo stays in the cytosol, while both RAN:GDP and Importin now enter the nucleus. Here, RAN:GDP is converted into RAN:GTP by RCC1, where it binds to a newly formed Importin: cargo complex, and is exported out of the nucleus, completing a cycle. While in the cytoplasm, RANGAP-1 is phosphorylated and stabilized through SUMOylation and an interaction with Ubc9 and RanBP2. Human RANGAP-1 is 587 amino acids (aa) in length. It contains six LRRs (aa 48-343) plus two utilized acetylation sites and five phosphorylated Ser/Thr, and there is one SUMOylation motif between aa 523-526. There are three potential splice forms. One contains a single Ser insertion after Gly330, while a second contains an alternative start site 55 aa upstream of the standard site. A third isoform possesses that same upstream start site coupled to a 25 aa substitution for aa 525-587. Over aa 418-587, human RANGAP-1 shares 82% aa sequence identity with mouse RANGAP-1.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.