

Recombinant Human RAN Protein, MYC/DDK-tagged, C13 and N15-labeled

Cat. No. RAN-065H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	RAN MS Standard C13 and N15-labeled recombinant protein (NP_006316) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.
Species	Human
Source	HEK293
Description	RAN (ras-related nuclear protein) is a small GTP binding protein belonging to the RAS superfamily that is essential for the translocation of RNA and proteins through the nuclear pore complex. The RAN protein is also involved in control of DNA synthesis and cell cycle progression. Nuclear localization of RAN requires the presence of regulator of chromosome condensation 1 (RCC1). Mutations in RAN disrupt DNA synthesis. Because of its many functions, it is likely that RAN interacts with several other proteins. RAN regulates formation and organization of the microtubule network independently of its role in the nucleus-cytosol exchange of macromolecules. RAN could be a key signaling molecule regulating microtubule polymerization during mitosis. RCC1 generates a high local concentration of RAN-GTP around chromatin which, in turn, induces the local nucleation of microtubules. RAN is an androgen receptor (AR) coactivator that binds differentially with different lengths of polyglutamine within the androgen receptor. Polyglutamine repeat expansion in the AR is linked to Kennedy's disease (X-linked spinal and bulbar muscular atrophy). RAN coactivation of the AR diminishes with polyglutamine expansion within the AR, and this weak coactivation may lead to partial androgen

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insensitivity during the development of Kennedy's disease.

Molecular Mass	24.4 kDa
AA Sequence	MAAQGEPQVQFKLVLVGDGGTGKTTFVKRHLTGEFEKKYVATLGVEVHPLVFHTNR GPIKFNVWDTAGQEKFGLRDGYIQAQCAIMFDVTSRVTYKNVPNWHRDLVRVC ENIPIVLCGNKVDIKDRKVKAKSIVFHRKKNLQYYDISAKSNYNFEKPFLWLARKLIGD PNLEFVAMPALAPPEVVM DPALAAQYEHDLVAQT TALPDEDDDLTRTRPLEQKLIS EEDLAANDILDYKDDDDKV
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 3 months from receipt of products under proper storage and handling conditions.
Storage	Store at -80 centigrade. Avoid repeated freeze-thaw cycles.
Concentration	50 µg/mL as determined by BCA
Storage Buffer	100 mM glycine, 25 mM Tris-HCl, pH 7.3.

GENE INFORMATION

Gene Name	RAN RAN, member RAS oncogene family [Homo sapiens (human)]
Official Symbol	RAN
Synonyms	RAN; RAN, member RAS oncogene family; ARA24; Gsp1; TC4; GTP-binding nuclear protein Ran; GTPase Ran; RanGTPase; androgen receptor-associated protein 24; guanosine triphosphatase Ran; member RAS oncogene family; ras-like protein TC4; ras-related nuclear protein; EC 3.6.5.1; EC 3.6.5.2; EC 3.6.5.3; EC 3.6.5.4

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Gene ID	5901
mRNA Refseq	NM_006325
Protein Refseq	NP_006316
MIM	601179
UniProt ID	P62826
SDS-PAGE	