

#4462 Store at -20°C

# Ran Antibody



✓ 100 µl  
(10 western blots)

**Orders** ■ 877-616-CELL (2355)  
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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #5901  
Swiss-Prot Acc. #P62826

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, M, R, Mk, Hm, B, (Dm, X)	24 kDa	Rabbit**

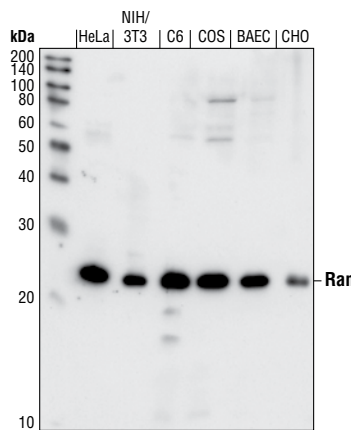
**Background:** Ran is a small GTPase of the Ras family that plays a central role in the spacial and temporal organization of eukaryotic cells. During interphase, Ran-GDP localizes to the cytoplasm and Ran-GTP to the nucleus. This polarized localization of Ran ensures its role in nuclear transport (1). During mitosis, Ran-GTP is chromatin associated, where it promotes spindle assembly and nuclear envelope formation (1,2). In S phase, Ran-GTP associates with and inhibits MCM helicase, ensuring precise chromosomal DNA duplication during the cell cycle (3).

**Specificity/Sensitivity:** Ran Antibody detects endogenous levels of total Ran protein. The antibody does not cross-react with other small GTPases of the Ras family.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with two synthetic peptides corresponding to amino acids surrounding Arg29 and Asn143 of human Ran. Antibodies are purified by protein A and peptide affinity chromatography.

### Background References:

- (1) Quimby, B.B. and Dasso, M. (2003) *Curr. Opin. Cell Biol.* 15, 338–344.
- (2) Hetzer, M. et al. (2002) *Nat. Cell Biol.* 4, 177–184.
- (3) Yamaguchi, R. and Newport, J. (2003) *Cell* 113, 115–125.



Western blot analysis of extracts from HeLa, NIH/3T3, C6, COS, BAEC, and CHO cells using Ran Antibody.

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

### Recommended Antibody Dilutions:

Western Blotting 1:1000

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA—Peptide

**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine

Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.