Revision 1

Store at -20C

#13929

Tom20 Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R Mk	Endogenous	16	Rabbit	#Q15388	9804

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

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.

Specificity/Sensitivity

Tom20 Antibody recognizes endogenous levels of total Tom20 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human Tom20 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Mitochondria play a central role in cellular energy metabolism and are essential organelles in eukaryotes. In humans, 13 proteins are encoded by the mitochondrial genome while the vast majority of mitochondrial proteins are encoded by the nuclear genome. As a result, most mitochondrial proteins are synthesized as precursors in the cytoplasm and imported across mitochondrial membranes by one or more translocase protein complexes (1). The translocase of the outer mitochondrial membrane (TOM complex) facilitates the import of proteins through the outer mitochondrial membrane, while the complementary translocase of the inner membrane (TIM complex) is responsible for protein transport to the mitochondrial matrix. The TOM complex consists of the receptors TOM20, TOM22, TOM70, and the channel-forming protein TOM40 (1). TOM20 is localized in the outer mitochondrial membrane and initially recognizes precursors with a presequence to facilitate protein import across the outer mitochondrial membrane (2). In a sequential process, recognition of the presequence by TOM20 is followed by tethering of the presequence to the TOM40 protein complex for efficient protein import (3).

Background References

1. Chacinska, A. et al. (2009) *Cell* 138, 628-44.
2. Saitoh, T. et al. (2007) *EMBO J* 26, 4777-87.
3. Yamamoto, H. et al. (2011) *Proc Natl Acad Sci U S A* 108, 91-6.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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Limited Uses

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