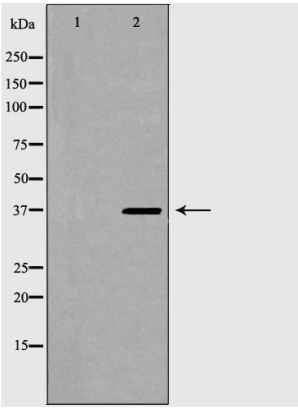
TOR1A Antibody – Rabbit Polyclonal

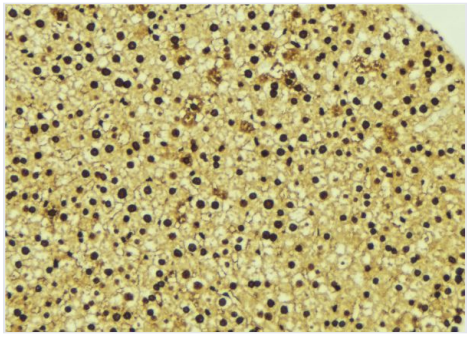
PRODUCT OVERVIEW

Product Name	TOR1A, Polyclonal Antibody
Full Product Name	TOR1A Antibody
Product Gene Name	anti-TOR1A antibody
Product Synonym Names	DQ2; Dystonia 1; Dystonia 1 protein; Dystonia 1 torsion; Dyt1; TOR1A; TOR1A_HUMAN; Torsin 1A; Torsin A; Torsin family 1 member A; Torsin family 1, member A (torsin A); Torsin-1A
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Concentration	1mg/ml (lot specific)
Specificity	TOR1A antibody detects endogenous levels of total TOR1A
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.
Antibody/Peptide Pairs	TOR1A peptide (MBS9626168) is used for blocking the activity of TOR1A antibody (MBS9607452)
Molecular Weight	Observed: 38 kDa Predicted: 38 kDa
3D Structure	ModBase 3D Structure for O14656
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Immunogen	A synthesized peptide derived from human TOR1A
Subcellular Location	Endoplasmic Reticulum; Cytoskeleton; Nucleus
Tissue Specificity	Widely expressed. Highest levels in kidney and liver. In the brain, high levels found in the dopaminergic neurons of the substantia nigra pars compacta, as well as in the neocortex, hippocampus and cerebellum. Also highly expressed in the spinal cord.
Predicted Cross Reactivity	**Bovine, Horse, Sheep, Rabbit, Dog, Chicken**
Similarity	Bovine (100%), Horse (89%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (89%)
Conjugation	Unconjugated
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-TOR1A antibody	Western Blot (WB), Immunohistochemistry (IHC), ELISA (EIA)
Application Notes for anti-TOR1A antibody	WB: 1:500-1:2000 IHC: 1:50-1:200

Related Product Information for anti-TOR1A antibody	Description: The neurological condition Dystonia is associated with sustained muscle contractions and abnormal posturing (1). TorsinA, torsinB, torp2A and torp3A belong to the family of ATPases associated with cellular activites (AAA+) and mutations in torsinA cause early onset dystonia (2). TorsinA has been shown to suppress intracellular protein aggregation in C. elegans and possesses chaperon activity. Interestingly, torsinA is highly expressed in dopaminergic neurons and associates with alpha-synuclein in Lewy bodies, which pathologically characterize Parkinson's Disease (3-5). Function: Protein with chaperone functions important for the control of protein folding, processing, stability and localization as well as for the reduction of misfolded protein aggregates. Involved in the regulation of synaptic vesicle recycling, controls STON2 protein stability in collaboration with the COP9 signalosome complex (CSN). In the nucleus, may link the cytoskeleton with the nuclear envelope, this mechanism seems to be crucial for the control of nuclear polarity, cell movement and, specifically in neurons, nuclear envelope integrity. Participates in the cellular trafficking and may regulate the subcellular location of multipass membrane proteins such as the dopamine transporter SLC6A3, leading to the modulation of dopamine neurotransmission. In the endoplasmic reticulum, plays a role in the quality control of protein folding by increasing clearance of misfolded proteins such as SGCE variants or holding them in an intermediate state for proper refolding. May have a redundant function with TOR1B in non-neural tissues. Subunit Structure: Homohexamer. Interacts with TOR1B; the interaction may be specific of neural tissues. Interacts (ATP-bound) with TOR1AIP1 and TOR1AIP2; the interactions induce ATPase activity. Interacts with KLHL14; preferentially when ATP-free. Interacts with KLC1 (via TPR repeats); the interaction associates TOR1A with the kinesin oligomeric complex. Interacts with COPS4; the interaction associates TOR1A with the CSN complex. Interacts with SNAPIN; the interaction is direct and associates SNAPIN with the CSN complex. Interacts with STON2. Interacts (ATP-bound) with SYNE3 (via KASH domain); the interaction is required for SYNE3 nuclear envelope localization. Interacts with VIM; the interaction associates TOR1A with the cytoskeleton. Interacts with PLEC. Interacts (ATP-bound) with SLC6A3; regulates SLC6A3 transport to the plasma membrane. Post-translational Modifications: N-glycosylated. Similarity: Belongs to the ClpA/ClpB family. Torsin subfamily.
Other Notes	Small volumes of anti-TOR1A antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for TOR1A purchase	MBS9607452 is an antibody targeting TOR1A. Also known as TOR1A Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.



Western Blot (WB) of anti-TOR1A antibody
Western blot analysis of extracts of MCF-7, using TOR1A antibody. The lane on the left is treated with the antigen-specific peptide.



Immunohistochemistry (IHC) of anti-TOR1A antibody
MBS9607452 at 1/100 staining Mouse liver tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for TOR1A. It may not necessarily be applicable to this product.

NCBI GI #	4557541
NCBI GeneID	1861
NCBI Accession #	NP_000104.1
UniProt Primary Accession #	O14656
UniProt Secondary Accession #	Q53Y64; Q96CA0; B2RB58

UniProt Related Accession #	O14656
GenBank Nucleotide #	NM_000113.2
NCBI Official Full Name	torsin-1A
NCBI Official Synonym Full Names	torsin family 1 member A
NCBI Official Symbol	TOR1A
NCBI Official Synonym Symbols	DQ2; DYT1
UniProt Protein Name	Torsin-1A
UniProt Synonym Protein Names	Dystonia 1 protein; Torsin ATPase-1A (EC:3.6.4.-); Torsin family 1 member A
Protein Family	Torsin
UniProt Gene Name	TOR1A
UniProt Synonym Gene Names	DQ2; DYT1; TA; TORA
NCBI Protein Information	torsin-1A
NCBI Summary for TOR1A	The protein encoded by this gene is a member of the AAA family of adenosine triphosphatases (ATPases), is related to the Clp protease/heat shock family and is expressed prominently in the substantia nigra pars compacta. Mutations in this gene result in the autosomal dominant disorder, torsion dystonia 1. [provided by RefSeq, Jul 2008]
UniProt Comments for TOR1A	Protein with chaperone functions important for the control of protein folding, processing, stability and localization as well as for the reduction of misfolded protein aggregates. Involved in the regulation of synaptic vesicle recycling, controls STON2 protein stability in collaboration with the COP9 signalosome complex (CSN). In the nucleus, may link the cytoskeleton with the nuclear envelope, this mechanism seems to be crucial for the control of nuclear polarity, cell movement and, specifically in neurons, nuclear envelope integrity. Participates in the cellular trafficking and may regulate the subcellular location of multipass membrane proteins such as the dopamine transporter SLC6A3, leading to the modulation of dopamine neurotransmission. In the endoplasmic reticulum, plays a role in the quality control of protein folding by increasing clearance of misfolded proteins such as SGCE variants or holding them in an intermediate state for proper refolding. May have a redundant function with TOR1B in non-neural tissues.
Research Articles on TOR1A	**1.** Association between rs35153737 TOR1A variant and dystonia in a southwestern Chinese population.
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