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MADD Antibody

Catalog # ASC10024

Product Information

Application	WB, IF, ICC, E
Primary Accession	Q8WXG6
Other Accession	AAD12154, 3289973
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	183303
Conjugate	Unconjugated
Application Notes	MADD antibody can be used for detection of MADD by Western blot at 1 - 2 mg/mL. 200 to 220 kDa bands should be detected. Antibody can also be used for immunocytochemistry starting at 10 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	8567
Other Names	MADD Antibody: DENN, IG20, RAB3GEP, DENN, KIAA0358, MAP kinase-activating death domain protein, Differentially expressed in normal and neoplastic cells, MAP-kinase activating death domain
Target/Specificity	MADD;
Reconstitution & Storage	MADD antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	MADD Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MADD {ECO:0000312|EMBL:AAB57735.1, ECO:0000312|HGNC:HGNC:6766}
Function	Guanyl-nucleotide exchange factor that regulates small GTPases of the Rab family (PubMed:18559336, PubMed:20937701). Converts GDP-bound inactive form of RAB27A and RAB27B to the GTP-bound active forms (PubMed:18559336, PubMed:20937701). Converts GDP-bound inactive form of RAB3A, RAB3C and RAB3D to the GTP-bound active forms, GTPases involved in synaptic vesicle exocytosis and vesicle secretion (By similarity). Plays a role in synaptic vesicle formation and in vesicle trafficking at the neuromuscular junction (By similarity). Involved in up-regulating a

	post-docking step of synaptic exocytosis in central synapses (By similarity). Probably by binding to the motor proteins KIF1B and KIF1A, mediates motor-dependent transport of GTP-RAB3A- positive vesicles to the presynaptic nerve terminals (By similarity). Plays a role in TNFA-mediated activation of the MAPK pathway, including ERK1/2 (PubMed:32761064). May link TNFRSF1A with MAP kinase activation (PubMed:9115275). May be involved in the regulation of TNFA-induced apoptosis (PubMed:11577081, PubMed:32761064).
Cellular Location	Cell membrane. Cytoplasm. Cell projection, axon {ECO:0000250|UniProtKB:Q80U28}
Tissue Location	Expressed in testis, ovary, brain and heart (PubMed:8988362). Expressed in spleen, thymus, prostate, testis, ovary, small instestine and colon (PubMed:9115275). Expressed in liver (PubMed:9796103). [Isoform 2]: Expressed in the brain, breast, kidney, lung, ovary, pancreas, testis, uterus, stomach and thyroid [Isoform 4]: Expressed in the brain, breast, kidney, lung, ovary, pancreas, testis, uterus, stomach and thyroid [Isoform 6]: Not detected in the brain, breast, kidney, lung, ovary, pancreas, testis, uterus, stomach and thyroid

Background

MADD Antibody: MAP kinase-activating death domain protein (MADD) was initially identified as the type 1 tumor necrosis factor receptor (TNFR1) associated protein though their death domains. Overexpression of MADD activates MAP kinases ERK and JNK and induces the phosphorylation of cytosolic phospholipase A2. MADD shares 98% identity with DENN (for differentially expressed in neoplastic vs. normal cells), which was recently identified as a substrate for c-jun N-terminal kinase 3 (JNK3). MADD has greater than 94% overall identity to a GDP/GTP exchange protein Rab3-GEP. MADD is 87% identical to KIAA0358, a brain protein of unknown function. Identification of MADD as a component of the TNFR1 signaling complex and the similarity between MADD and Rab3-GEP provides a connection between TNFR1 activation and downstream MAP kinase activity through a guanine-nucleotide exchange protein.

References

Schievella AR, Chen JH, Graham JR, Lin LL. MADD, a novel death domain protein that interacts with the type 1 tumor necrosis factor receptor and activates mitogen-activated protein kinase. J Biol Chem 1997;272:12069-12075

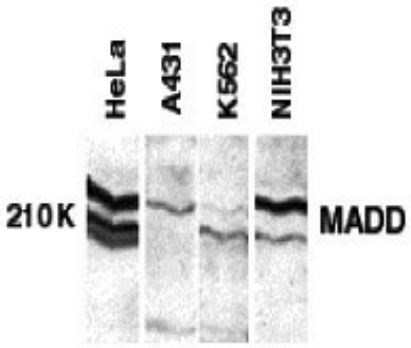
Chow VT, Lee SS. DENN, a novel human gene differentially expressed in normal and neoplastic cells. DNA Seq 1996;6:263-273

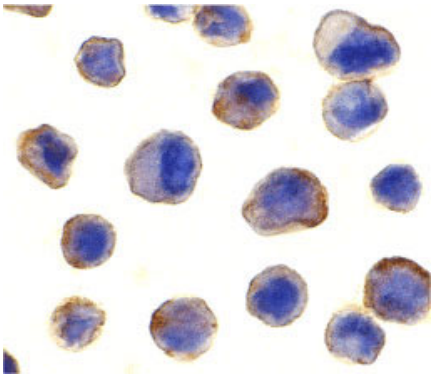
Zhang Y, Zhou L, Miller CA. A splicing variant of a death domain protein that is regulated by a mitogen-activated kinase is a substrate for c-Jun N-terminal kinase in the human central nervous system. Proc Natl Acad Sci U S A 1998;95:2586-2591

Brown TL and Howe PH. MADD is highly homologous to a Rab3 guanine-nucleotide exchange protein (Rab3-GEP). Curr Biol 1998;8:R191

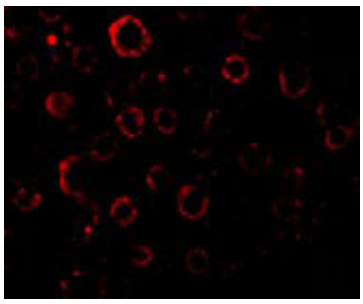
Images

Western blot analysis of MADD in whole cell lysates from the indicated cell lines with MADD antibody at 1:250 dilution.





Immunocytochemistry of MADD in human spleen tissue with MADD antibody at 10 µg/mL.



Immunofluorescence of MADD in Hela cells with MADD antibody at 20 µg/mL.

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