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# Product Information

**Anti-MADD**
produced in rabbit, IgG fraction of antiserum

Catalog Number **M5683**

**Synonym:** Anti-MAP Kinase-Activating Death Domain

**Product Description**
Anti-MADD is produced in rabbit using a peptide corresponding to amino acids 1570 to 1588 of human MAP kinase activating death domain protein (MADD)[1] as immunogen. This sequence is identical to DENN and differs by one amino acid with rat GDP/GTP exchange protein Rab3-GEP.[2,3]

Anti-MADD recognizes MADD in both human and mouse by immunoblotting (200-220 kDa).

MADD is a component of the tumor necrosis factor receptor 1 (TNFR1) signaling complex. Its death domain associates with the death domain of TNFR1 at residues crucial for signal generation and the two proteins have been shown to co-immunoprecipitate. Overexpression of MADD appears to activate the mitogen-activated protein (MAP) kinase ERK (extracellular signal-regulated kinase). Furthermore, expression of the C-terminal death domain of MADD activates both ERK and JNK MAP kinases and induces the phosphorylation of cytosolic phospholipase $A_2$ ($cPLA_2$).[1]

MADD shares 98% identity with DENN (differentially expressed in neoplastic vs. normal cells) which has been shown to be a substrate for c-Jun N-terminal kinase 3 (JNK3).[4] MADD has >94% overall identity to a GDP/GTP exchange protein Rab3-GEP.[3,5] MADD thus appears to be a component of the TNFR1, connecting TNFR1 activation with downstream MAP kinase activity through GDP/GTP exchange activity.

**Reagents**
Supplied at 0.5 mg/ml in phosphate buffered saline, containing 0.02% sodium azide.

**Precautions and Disclaimer**
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

**Storage/Stability**
Antibody can be stored at 2-8 °C for three months and at −20 °C for 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.

**Product Profile**
Immunoblotting: the recommended working concentration is 2 µg/ml using total HeLa or NIH3T3 cell lysates. Bands at 200-220 kDa are detected.

**Note**: In order to obtain best results and assay sensitivities of different techniques and preparations, we recommend determining optimal working dilutions by titration test.

**References**
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2. Chow, V.T., and Lee, S.S., DENN, a novel gene differentially expressed in normal and neoplastic cells., *DNA seq*., 6, 263-273 (1996).
3. Wada M., et al., Isolation and characterization of a GDP/GTP exchange protein specific for the Rab3 subfamily small G proteins. *J. Biol. Chem*., **272**, 3875 3878 (1997).
4. Zhang, Y., et al., 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. USA* **, 95,** 2586-2591 (1998).
5. Brown, T. L., and Howe, P.H., MADD is highly homologous to a Rab3 guanine-nucleotide exchange protein (Rab3-GEP). *Curr. Biol*., **8,** R191 (1998).

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