

Anti-MAGE-G1 / Necdin-like 2 antibody, rabbit serum (MG1)

74-114 100ul

MAGE-G1 (melanoma-associated antigen G1, also designated necdin-like 2) gene encodes necdin homologous protein. MAGE-G1 gene, similarly to necdin gene, has been mapped to the region of proximal chromosome 15q in human, which is subject to genomic imprinting and implicated in various human neurological and mental disorders (ref.1). From this finding it is suggested that MAGE-G1 is involved in brain development, and its abnormality causes neurodevelopmental diseases, although its biochemical and functional features remain almost unknown. MAGE-G1 has characteristics similar to those of necdin, which suppresses cell growth by inducing cell cycle arrest. MAGE-G1 like necdin targets both the transcription factor E2F1 and p75 neurotrophin receptor (p75NTR) to regulate cell viability during brain development (ref. 2). An antibody (named MG1) against mouse MAGE-G1 was raised in rabbit (ref. 2).

Applications

1. Western blot (1/3,000-1/1,000)
 2. Immunoprecipitation
 3. Immunoaffinity purification
- Not tested for other applications

Specification

Immunogen: Recombinant MBT-fused mouse MAGE-G1 (aa 1-279).

Reactivity: Reacts with mouse, rat, and human MAGE-G1

Form: Antiserum with 0.05% sodium azide

Storage: Shipped at 4°C. Aliquot and store at -20°C.

Data Link: Swiss-Prot [Q9CPR8](#) (mouse), [Q96MG7](#) (human)

References: This antibody was produced and used in ref. 2.

1. Chibuk TK *et al* (2001) "A necdin/MAGE-like gene in the chromosome 15 autism susceptibility region: expression, imprinting, and mapping of the human and mouse orthologues" *BMC Genet* 2: 22 PMID: [11782285](#)
2. Kuwako K *et al*. (2004) "Necdin-related MAGE proteins differentially interact with the E2F1 transcription factor and the p75 neurotrophin receptor" *J Biol Chem* 279: 1703-1712 PMID: [14593116](#)

Fig. 1 Immunoblotting of MAGE-G1 with this antibody (ref. 2).

E2F1, p75NTR, necdin, and MAGE-G1 (G1) were analyzed by Western blotting in whole cell lysates of P19 cells at different stages of neural differentiation. UN, undifferentiated P19 cells; RA, aggregated cells treated with retinoic acid; PN, enriched postmitotic neurons.

The result revealed that P19 embryonal carcinoma cells express necdin (43 kDa), MAGE-G1 (32 kDa), E2F1 (58 kDa), and p75NTR (68 and 75 kDa) during the course of neuronal differentiation. The level of MAGE-G1 was the highest in retinoic acid-treated P19 cells.

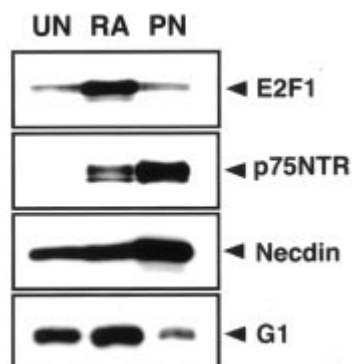


Fig. 2 Immunoaffinity purification with anti-MAGE-G1 IgG (ref. 2).

Detection of endogenous complexes of MAGE-G1 with E2F1 and p75NTR.

The lysate from retinoic acid-treated P19 cells was applied to immunoaffinity columns of anti-MAGE-G1 IgG (α G1 IgG) and preimmune IgG (Preimmune IgG). Bound proteins were immunoblotted for E2F1, p75NTR, and MAGE-G1 (G1).

MAGE-G1 endogenously forms stable complexes with E2F1 and p75NTR in differentiated P19 cells.

