Mouse CMG-2/ANTXR2 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF3636

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse CMG-2/ANTXR2 in direct ELISAs and Western blots. In direct ELISAs, approximately 10% cross-reactivity with recombinant human CMG-2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse CMG−2/ANTXR2 Gly26-Gly318 Accession # Q6DFX2
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

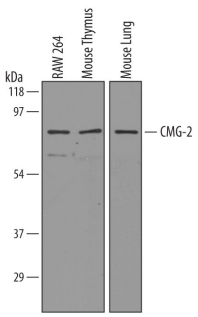
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below

DATA

Western Blot



Detection of Mouse CMG-2/ANTXR2 by Western Blot. Western blot shows lysates of RAW 264.7 mouse monocyte/macrophage cell line, mouse thymus tissue, and mouse lung tissue. PVDF membrane was probed with 1 µg/mL of Mouse CMG-2/ANTXR2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3636) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for CMG-2/ANTXR2 at approximately 55-65 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Capillary Morphogenesis Gene-2 (CMG-2) is a widely expressed anthrax toxin receptor (ATR) family protein (1-4). CMG-2 is a ~55 kDa protein that contains a 31 amino acid (aa) signal sequence, a 287 aa extracellular domain (ECD), a 21 aa transmembrane sequence, and a 148 aa cytoplasmic domain. Unlike human CMG-2 which has four isoforms, only one sequence has been reported for mouse CMG-2. The main functional domain of CMG-2 is an extracellular integrin-like von Willebrand factor type A (VWA) domain with a metal ion dependent adhesion site (MIDAS), through which it adheres selectively to collagen type IV and laminin (1-6). CMG-2 isoform 2 is induced in HUVEC as they undergo capillary formation in collagen matrices *in vitro* (4). In humans, CMG-2 is mutated in juvenile hyaline fibromatosis and infantile systemic hyalinosis disorders, and several of these mutations result in loss of laminin binding (7). CMG-2 and the related protein ATR/TEM8 serve as receptors for the protective antigen (PA) of Bacillus anthracis (1, 2). After binding the VWA domain, PA undergoes furin-type cleavage, forms a heptameric receptor/PA pre-pore and binds LF or EF toxin subunits (6, 8, 9). Transport to low pH endosomes, which requires CMG-2 ubiquitination and interaction with the LDL receptor related protein LRP6 (10, 11), allows PA pore formation and release of toxin to the cytoplasm (11, 12). Soluble CMG-2 VWA domain acts as a dummy receptor that can protect cultured cells from anthrax intoxication (2). Within the extracellular region, mouse CMG-2 shares 84%, 91%, 80%, and 83% amino acid sequence homology with human, rat, bovine, and canine CMG-2, respectively. CMG-2 VWA domain also shares 60% aa identity with ATR/TEM8.

References:

1. Scobie, H.M. and J.A.T. Young (2005), Curr. Opin. Microbiol. **8**:106.
2. Scobie, H.M. *et al.* (2003) Proc. Natl. Acad. Sci. USA **100**:5170.
3. Swiss Prot. Accession #: Q6DFX2.
4. Bell, S.E. *et al.* (2001) J. Cell Sci. **114**:2755.
5. Lacy, D.B. *et al.* (2004) Proc. Natl. Acad. Sci. USA **101**:6367.
6. Santelli, E. *et al.* (2004) Nature **430**:905.
7. Dowling, O. *et al.* (2003) Am. J. Hum. Genet. **73**:957.
8. Wigelsworth, D.J. *et al.* (2004) J. Biol. Chem. **279**:23349.
9. Go, M.Y. *et al.* (2006) J. Mol. Biol. **360**:145.
10. Abrami, L. *et al.* (2006) J. Cell Biol. **172**:309.
11. Wei, W. *et al.* (2006) Cell **124**:1141.
12. Lacy, D.B. *et al.* (2004) Proc. Natl. Acad. Sci. USA **101**:13147.

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