

## DESCRIPTION

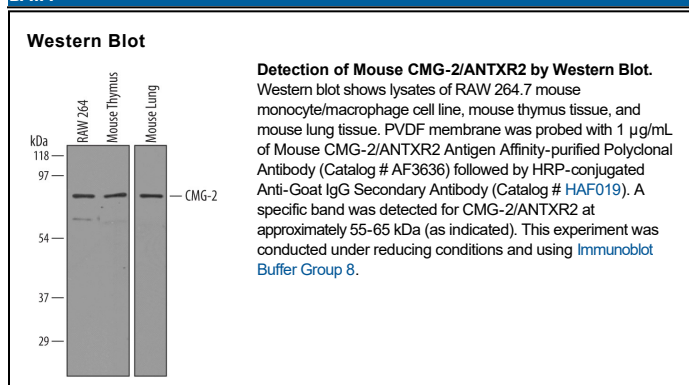
<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse CMG-2/ANTXR2 in direct ELISAs and Western blots. In direct ELISAs, approximately 10% cross-reactivity with recombinant human CMG-2 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen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

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 µg/mL	See Below

## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## 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:

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