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# Antibody Datasheet

**Product Name:** Mouse anti *Rubella virus,* glycoprotein E2

**Clone number:** 1717

**Isotype:** Mouse $IgG_1$

**Product code:** MAB12266-100

**Batch Number:**

**Amount:** 0.1mg

**Concentration:** 1 mg/ml

**Buffer:** Phosphate Buffered Saline pH7.4

**Preservative:** 0.09% Sodium Azide ($NaN_3$)

**Purification:** The antibody was purified by affinity chromatography on protein A sepharose.

**Specificity:** This antibody is specific for Rubella virus, glycoprotein E2

**Applications:** ELISA, IFA, WB (see data below).

**Secondary reagents:** Goat anti mouse IgG:HRP (PAB21441HRP)

**Antigen background:** Rubella virus is a single stranded positive sense RNA virus. It is the sole member of the *Rubivirus* genus which belongs to the *Togaviridae* family of viruses. Rubella virus contains three structural proteins, the capsid protein and glycoproteins E1 and E2. The virus also encodes non-structural proteins p90 and p150, which are involved in viral replication. Humans are the only known host of Rubella virus and infection is spread from person-to-person via respiratory aerosol droplets.

First isolated in 1962, Rubella virus is the causative agent of a highly contagious disease known as Rubella or German Measles. Rubella is an acute self-limiting and

generally mild disease predominantly affecting children and young adults. The infection can be asymptomatic in some cases or may cause a mild fever with symptoms of malaise, conjunctivitis and a maculopapular rash (Lambert, N).

However, Rubella virus contracted during the first trimester of pregnancy is of significant health concern, as it can be passed to the foetus in approximately 90% of cases (WHO). Rubella infection in the foetus can result in miscarriage, foetal death or multiple congenital defects referred to as congenital rubella syndrome (CRS). Congenital defects associated with CRS commonly affect hearing, sight, heart and brain. Other life-long conditions associated with CRS include autism, thyroid dysfunction and diabetes mellitus (CDC).

Rubella infection and vaccination provide >95% chance of developing lifetime immunity. Vaccination, using a live attenuated strain of the virus, has significantly reduced the risk of developing Rubella, and CRS, in countries where a well-established vaccination program is in place. However, many countries still do not include Rubella vaccination in their National immunization programme and women of childbearing age are at high risk of developing Rubella in these areas.

**References:**

Lambert N, Strebel P, Orenstein W, Icenogle J, Poland GA. (2015) Rubella. Lancet. Jun 6;385(9984):2297-307.

World Health Organization: Factsheet/Rubella

**Storage:**

Store at +4°C for up to three months, or at -20°C for longer periods
The antibody is shipped at ambient temperature.
Avoid repeated freeze/thaw cycles.

**Western blot analysis and ELISA were carried out, using the methods described below.**

## 1. Western blot

100ng of each antigen was separated on SDS-PAGE, either under reducing or non-reducing conditions. Proteins were transferred using Transblot for 10 minutes at 25V. 2% dry milk in PBS-T was used as blocking buffer and dilution buffer for antibodies. Primary antibodies (1:1,000) are shown in Figure 1 below; anti-mouse-IgG-HRP secondary antibody was used at 1:2,500. All steps were carried out for 1h at room temperature with gentle rocking. TMB Membrane was used for detection. Development time ~40 min.

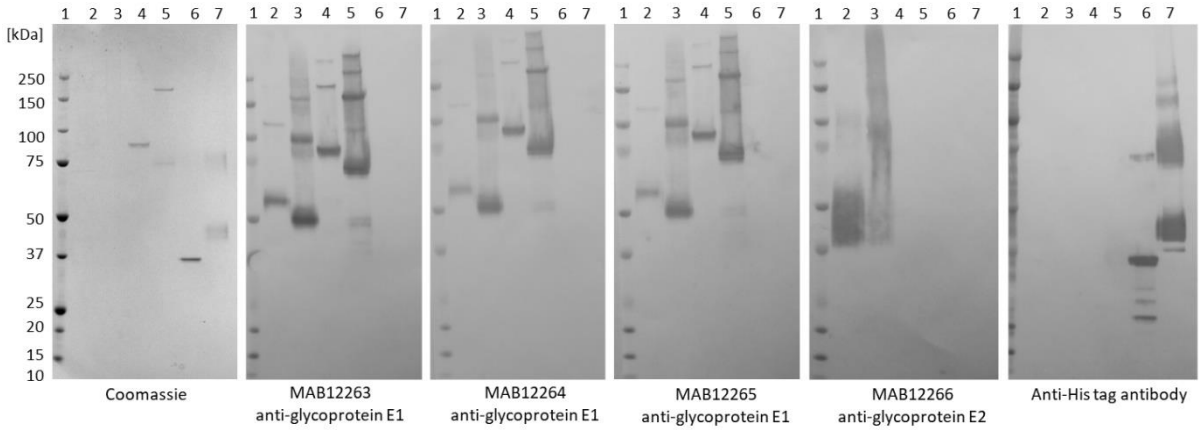


**Figure 1.** Western blot analysis of different monoclonal antibodies against Rubella VLPs, E1 and NP proteins. Lane 1 shows molecular weight Ladder; lane 2: Rubella VLP (REC31651); lane 3: Rubella VLP (REC31651) non-reducing; lane 4: Rubella E1-shFc (REC31655); lane 5: Rubella E1-shFc (REC31655) non-reducing; lane 6: Rubella NP (REC31668); lane 7: His-tagged control (DENV2 VLP, non-reducing).

## 2. ELISA

Greiner plates were coated overnight at 4°C with Rubella glycoprotein E1 (REC31655), Rubella VLP (REC31651) or Rubella Nucleoprotein (REC31668) at a concentration of 0.5µg/ml in PBS. Plates were washed once with PBS/0.1% Tween 20 (300µl/well) and blocked twice with PBS 1% BSA (300µl/well) for ~2 h. Antibodies were diluted in PBS/1% BSA/0.1% Tween 20 from 10,000ng/ml to 3ng/ml and added to the plates at 100µl/well and incubated with shaking for 2 h. Plates were then washed three times (300µl/well) with PBS 0.1% Tween 20. Anti-Mouse IgG-HRP was added (1:5000 dilution) in PBS/BSA/Tween (100µl/well) and incubated for 1 h with shaking. Plates were then washed six times in PBS/Tween 20 (300µl/well). KPL Sureblue substrate added (100µl/well), and the plate was incubated with shaking 15 min. and stopped with 200µl 1M HCL.