

Product Specification Sheet

Recombinant Rabies Virus glycoprotein

□ Cat. # RBVGP25-R-10

Recombinant (E. coli) purified Rabies Virus Glycoprotein (~58 kda, RVG)

SIZE: 10 ug

The rabies virus is a member of the Lyssavirus genus, which have helical symmetry, so their infectious particles are approximately cylindrical in shape. They are characterized by an extremely broad host spectrum ranging from plants to insects and mammals; human-infecting viruses more commonly have cubic symmetry and take shapes approximating regular polyhedron. The virus has a bullet like shape with a length of about 180 nm and a cross-sectional diameter of about 75 nm. One end is rounded or conical and the other end is planar or concave. The lipoprotein envelope carries knob-like spikes composed of Glycoprotein G. Spikes do not cover the planar end of the virion (virus particle). Beneath the envelope is the membrane or matrix (M) protein layer which may be invaginated at the planar end. The core of the virion consists of helically arranged ribonucleoprotein

Rapid and accurate laboratory diagnosis of rabies in humans and other animals are essential for timely administration of post exposure prophylaxis. The nature of rabies disease dictates that laboratory tests be standardized, rapid, sensitive, specific, economical, and reliable. The standard test for rabies testing is dFA.

Rabies virus glycoprotein: [FUNCTION] Attaches the virus to host cellular receptor, inducing endocytosis of the virion. In the endosome, the acidic pH induces conformational changes in the glycoprotein trimer, which trigger fusion between virus and cell membrane. There is convincing *in vitro* evidence that the muscular form of the nicotinic acetylcholine receptor (nAChR), the neuronal cell adhesion molecule (NCAM), and the p75 neurotrophin receptor (p75NTR) bind glycoprotein G and thereby facilitate rabies virus entry into cells

(By similarity).

[SUBUNIT] Homotrimer. Interacts with matrix protein (By similarity).

[SUBCELLULAR LOCATION] Virion membrane; Single-pass type I membrane protein (Potential).

[PTM] Glycosylated and palmitoylated by host. Glycosylation is crucial for glycoprotein export at the cell surface (By similarity).

[BIOTECHNOLOGY] Primary surface antigen capable of inducing and reacting with virus-neutralizing antibodies. Almost all human and veterinary vaccines are based on the functional aspects of the G protein.

[MISCELLANEOUS] Arg-352 is highly involved in rabies virus pathogenicity. Its mutation dramatically attenuates the virus
[SIMILARITY] Belongs to the lyssavirus glycoprotein family.

Short-term: unopened, undiluted vials for less than a week at 4oC.

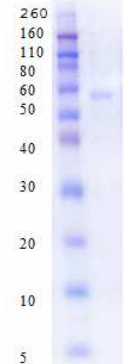
Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

Source of Antigen and Antibodies

Recombinant rabies virus glycoprotein (protein accession # >98% pure, ~58 Kda, His-tag) was expressed in E. coli and purified. It is supplied in 50 mM Tris-HCl (pH 8), 0.25M NaCl, 5 mM b-ME, 0.25M Imidazole, and 8M Urea (lot sp. conc on the vial). Store at -20oC or below for at least 6-months.

Fig: Purified rabies virus glycoprotein ~58 Kda.



Recommended Usage

ELISA
Western

Recombinant Protein is recognized by polyclonal (#RBVGP11-S) and monoclonal (#RBV14-M).

References: Tordo N (1986) PNAS 83, 3914-3918; Benmansour A (1992) Virology 187, 33-45;

*This product is for *In vitro* research use only.

Related material available from ADI

600-010-DRV	Dog Anti-Rabies Virus IgG ELISA Kit
600-020-HRV	Human Anti-Rabies Virus IgG ELISA Kit,
600-030-MRG	Mouse Anti-Rabies Virus IgG ELISA Kit,
600-040-RRG	Rabbit Anti-Rabies Virus IgG ELISA Kit,
600-045-RRM	Rabbit Anti-Rabies Virus IgM ELISA Kit,
600-050-HRG	Horse Anti-Rabies Virus IgG ELISA Kit,
600-060-CRG	Canine rabies virus antibody ELISA kit
600-070-CRG	Monkey Rabies Virus antibody ELISA
AE-200130-2	Swine/Porcine Pseudorabies Antibody ELISA
AE-200135-2	Swine/Porcine Pseudorabies Virus IgE Antibody Distinguishing kit
RBV14-M	Mouse monoclonal Anti-Rabies Virus IgG, aff pure
RBV13-S	Anti-Rabies Virus antiserum
RBV14-M	Mouse monoclonal Anti-Rabies Virus glycoprotein IgG, aff pure

RBVGP25-R-10 140905A

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