SYSY Antibodies

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WRB

Cat.No. 324 103; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Albumin was added for stabilization. For **reconstitution** add 50 µl H_2O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C to -80°C until use. Antibodies should be stored at +4°C when still lyophilized. Do not freeze! For detailed information, see back of the data sheet.
Applications	**WB**: 1 : 1000 (AP staining) **IP**: yes **ICC**: not tested yet **IHC**: not tested yet **IHC-P (FFPE)**: not tested yet
Immunogen	Recombinant protein corresponding to AA 30 to 99 from human WRB (UniProt Id: O00258)
Reactivity	Reacts with: rat (Q6P6S5), mouse (Q8K0D7), human (O00258). Other species not tested yet.
Specificity	K.D. validated PubMed: 27226539

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Background

The widely expressed tryptophan (**W**)-**r**ich **b**asic protein (**WRB**), also known as **c**ongenital **h**eart **d**isease protein **5** (**CHD 5**) has initially been described as a nuclear protein that plays a potential role in the pathogenesis of CHD in down syndrome patients.
Recently this protein has been identified as the receptor for TRC40/Asna1-mediated insertion of tail-anchored proteins into the ER membrane.

Selected References for 324 103

The WRB Subunit of the Get3 Receptor is Required for the Correct Integration of its Partner CAML into the ER.
Carvalho HJF, Del Bondio A, Maltecca F, Colombo SF, Borgese N
Scientific reports (2019) 91: 11887. . **WB, IP; tested species: human**

ER entry pathway and glycosylation of GPI-anchored proteins are determined by N-terminal signal sequence and C-terminal GPI-attachment sequence.
Hirata T, Yang J, Tomida S, Tokoro Y, Kinoshita T, Fujita M, Kizuka Y
The Journal of biological chemistry (2022) : 102444. . **WB; tested species: human**

Discrimination between the endoplasmic reticulum and mitochondria by spontaneously inserting tail-anchored proteins.
Figueiredo Costa B, Cassella P, Colombo SF, Borgese N
Traffic (Copenhagen, Denmark) (2018) 193: 182-197. . **WB**

Tail-anchored Protein Insertion in Mammals: FUNCTION AND RECIPROCAL INTERACTIONS OF THE TWO SUBUNITS OF THE TRC40 RECEPTOR.
Colombo SF, Cardani S, Maroli A, Vitiello A, Soffientini P, Crespi A, Bram RF, Benfante R, Borgese N
The Journal of biological chemistry (2016) 29129: 15292-306. . **WB; KD verified; tested species: rat**

Selected General References

WRB and CAML are necessary and sufficient to mediate tail-anchored protein targeting to the ER membrane.
Vilardi F et al. PLoS ONE (2014) PubMed:24392163

WRB is the receptor for TRC40/Asna1-mediated insertion of tail-anchored proteins into the ER membrane.
Vilardi F et al. J. Cell. Sci. (2011) PubMed:21444755

Identification and characterization of a new human cDNA from chromosome 21q22.3 encoding a basic nuclear protein.
Egeo A et al. Hum. Genet. (1998) PubMed:9544840

Access the online factsheet including applicable protocols at https://sysy.com/product/324103 or scan the QR-code.

FAQ - How should I store my antibody?

Shipping Conditions

- All SYSY antibodies and control proteins/peptides are shipped lyophilized (vacuum freeze-dried). In this form, they remain stable without loss of quality at ambient temperatures for several weeks.

Storage of Sealed Vials after Delivery

- **Unlabeled** and **biotin-labeled antibodies** and **control proteins** should be stored at **4°C** before reconstitution. **Do not freeze lyophilized antibodies**. Temperatures below 0°C may impair performance.
- **Fluorescence-labeled antibodies** should be reconstituted immediately upon receipt. Long-term storage of lyophilized fluorophore-conjugates may cause aggregation.
- **Control peptides** should be stored at -20°C before reconstitution.

Long Term Storage after Reconstitution (General Considerations)

- **Do not use frost-free ("no-frost") freezers.** These units periodically warm to remove ice buildup, causing freeze–thaw cycles that can damage antibodies.
- Store vials in areas with minimal temperature fluctuation - preferably toward the back of the freezer, not on the door.
- Aliquot reconstituted antibodies and store at –20°C to –80°C.
- Avoid very small aliquots (<20 µL), as evaporation and adsorption to tube surfaces can reduce antibody concentration and activity.
- Use the smallest practical storage vial to minimize surface area.
- Adding glycerol to a final concentration of 50% prevents freezing at -20°C, allowing storage in liquid form and effectively avoiding freeze–thaw cycles.

Product Specific Hints for Storage

Control proteins / peptides

- Store at -20°C to -80°C

Monoclonal Antibodies

- **Ascites and hybridoma supernatant:** Store at -20°C to -80°C
  Prolonged storage at 4°C is not recommended, as proteases present in ascites may degrade antibodies.
- **Purified IgG:** Store at -20°C to -80°C
  Adding a carrier protein (e.g., BSA) enhances long-term stability.
  Many SYSY antibodies already contain carrier proteins - refer to the respective datasheet for details.

Polyclonal Antibodies

- **Crude antisera:** Can be stored at 4°C with antimicrobials added, but -20°C to -80°C is preferred
- **Affinity-purified antibodies:** Less stable than antisera; store at -20°C to -80°C
  Adding a carrier protein such as BSA improves long-term stability.
  Most SYSY antibodies already contain carrier proteins - refer to the respective datasheet for details.

Fluorescence-labeled Antibodies

- Store as a liquid with 1:1 (v/v) glycerol at -20°C, and protect from light exposure

Avoid repeated freeze-thaw cycles for all antibodies!

FAQ - How should I reconstitute my antibody?

Reconstitution

- All purified SYSY antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add the volume of deionized water specified in the corresponding datasheet. If a larger final volume is desired, first add the recommended amount of water, then adjust with PBS and, if needed, add a stabilizing carrier protein (e.g., BSA) to a final concentration of 2%. Some SYSY antibodies already contain albumin; please take this into account before adding additional carrier protein.

For complete reconstitution, carefully remove the vial cap. After adding water, briefly vortex the solution. To collect the liquid at the bottom of the vial, place the vial inside a 50 ml centrifuge tube padded with paper and centrifuge briefly.

- If desired, small amounts of azide or thimerosal may be added to prevent microbial growth. This is particularly recommended when storing an aliquot at 4°C.
- After reconstitution of fluorescence-labeled antibodies, add glycerol 1:1 (v/v) to achieve a final concentration of 50%. This prevents freezing at –20°C and keeps the antibody in liquid form, effectively avoiding freeze–thaw cycles.
- Glycerol may also be added to unlabeled primary antibodies as a general measure to prevent freeze–thaw damage.
- For further guidance, please refer to our **storage tips** and recommendations for reconstituted antibodies, control peptides, and control proteins.