

Sra1

Cat.No. 309 011; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg purified IgG, lyophilized. Azide was added before lyophilization. For reconstitution add 100 µl H ₂ O 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 : 100 up to 1 : 2000 (AP staining) IP: yes ICC: not recommended IHC: not recommended IHC-P: not tested yet ELISA: yes
Clone	30A4
Subtype	IgG1 (κ light chain)
Immunogen	Synthetic peptide corresponding to AA 519 to 556 from mouse Sra1 (UniProt Id: Q7TMB8)
Reactivity	Reacts with: human (Q7L576), rat, mouse (Q7TMB8). Other species not tested yet.
Specificity	Specific for Sra 1 but may cross-react with CYFIP 2/PIR 121 due to high sequence homology.

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

Background

The formation of cellular projections like lamellipodia and ruffles is accompanied by de novo actin nucleation and polymerization of actin filaments. Several protein factors like the Arp 2/3 complex, WASP/Scar and small GTPases of the Rho family have been shown to participate in this process. The Arp 2/3 complex is activated by GTP-loaded Rac 1 via WAVE proteins. The **Specifically Rac-associated protein or Sra 1**, also referred to as cytoplasmic FMR 1 interacting protein 1, has been shown to interact with WAVE 2 and other proteins like Abi 1 at the tips of membrane protrusions.

Selected References for 309 011

Haploinsufficiency of Cyfip1 produces fragile X-like phenotypes in mice.
Bozdagi O, Sakurai T, Dorr N, Pilorge M, Takahashi N, Buxbaum JD
PloS one (2012) 78: e42422. . **WB; tested species: mouse**

WAVE2-Abi2 complex controls growth cone activity and regulates the multipolar-bipolar transition as well as the initiation of glia-guided migration.
Xie MJ, Yagi H, Kuroda K, Wang CC, Komada M, Zhao H, Sakakibara A, Miyata T, Nagata K, Oka Y, Iguchi T, et al.
Cerebral cortex (New York, N.Y.: 1991) (2013) 236: 1410-23. . **WB; tested species: mouse**

Filopodia formation in the absence of functional WAVE- and Arp2/3-complexes.
Steffen A, Faix J, Resch GP, Linkner J, Wehland J, Small JV, Rottner K, Stradal TE
Molecular biology of the cell (2006) 176: 2581-91. . **WB**

Selected General References

Sra-1 interacts with Kette and Wasp and is required for neuronal and bristle development in Drosophila.
Bogdan S et al. Development (2004) PubMed:15269173

Sra-1 and Nap1 link Rac to actin assembly driving lamellipodia formation.
Steffen A et al. EMBO J. (2004) PubMed:14765121

p140Sra-1 (specifically Rac1-associated protein) is a novel specific target for Rac1 small GTPase.
Kobayashi K et al. J. Biol. Chem. (1998) PubMed:9417078

Access the online factsheet including applicable protocols at <https://sysy.com/product/309011> or scan the QR-code.



FAQ - How should I store my antibody?

Shipping Conditions

- All our antibodies and control proteins / peptides are shipped lyophilized (vacuum freeze-dried) and are stable in this form 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. **They must not be stored in the freezer when still lyophilized!** Temperatures below zero may cause loss of performance.
- **Fluorescence-labeled antibodies** should be reconstituted immediately upon receipt. Long term storage (several months) may lead to aggregation.
- **Control peptides** should be kept at -20°C before reconstitution.

Long Term Storage after Reconstitution (General Considerations)

- The storage freezer must not be of the frost-free variety ("no-frost freezer"). This cycle between freezing and thawing (to reduce frost-build-up), which is exactly what should be avoided. For the same reason, antibody vials should be placed in an area of the freezer that has minimal temperature fluctuations, for instance towards the back rather than on a door shelf.
- Aliquot the antibody and store frozen (-20°C to -80°C). Avoid very small aliquots (below 20 µl) and use the smallest storage vial or tube possible. The smaller the aliquot, the more the stock concentration is affected by evaporation and adsorption of the antibody to the surface of the storage vial or tube. Adsorption of the antibody to the surface leads to a substantial loss of activity.
- The addition of glycerol to a final concentration of 50% lowers the freezing point of your stock and keeps your antibody at -20°C in liquid state. This efficiently avoids freeze and thaw cycles.

Product Specific Hints for Storage

Control proteins / peptides

- Store at -20°C to -80°C.

Monoclonal Antibodies

- **Ascites** and **hybridoma supernatant** should be stored at -20°C up to -80°C. **Prolonged storage at 4°C is not recommended!** Unlike serum, ascites may contain proteases that will degrade the antibodies.
- **Purified IgG** should be stored at -20°C up to -80°C. Adding a carrier protein like BSA will increase long term stability. Many of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

Polyclonal Antibodies

- **Crude antisera:** With anti-microbials added, they may be stored at 4°C. However, frozen storage (-20°C up to -80°C) is preferable.
- **Affinity purified antibodies:** Less robust than antisera. Storage at -20°C up to -80°C is recommended. Adding a carrier protein like BSA will increase long term stability. Most of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

Fluorescence-labeled Antibodies

- Store as a liquid with 1 : 1 (v/v) glycerol at -20°C. Protect these antibodies from light exposure.

Avoid repeated freeze-thaw cycles for all antibodies!

FAQ - How should I reconstitute my antibody?

Reconstitution

- All our purified antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add the amount of deionized water given in the respective datasheet. If higher volumes are preferred, add water as mentioned above and then the desired amount of PBS and a stabilizing carrier protein (e.g. BSA) to a final concentration of 2%. Some of our antibodies already contain albumin. Take this into account when adding more carrier protein. For complete reconstitution, carefully remove the lid. After adding water, briefly vortex the solution. You can spin down the liquid by placing the vial into a 50 ml centrifugation tube filled with paper.
- If desired, add small amounts of azide or thimerosal to prevent microbial growth. This is especially recommended if you want to keep an aliquot a 4°C.
- After reconstitution of fluorescence-labeled antibodies, add 1 : 1 (v/v) glycerol to a final concentration of 50%. This lowers the freezing point of your stock and keeps your antibody in liquid state at -20°C.
- Glycerol may also be added to unlabeled primary antibodies. It is a suitable way to avoid freeze-thaw cycles.
- Please refer to our **tips and hints for subsequent storage** of reconstituted antibodies and control peptides and proteins.