

Anti- SUR2A

Catalog# SMC-431D

Size: 100µg

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This product is for *in vitro* research use only and is not intended for use in humans or animals

StressMarq

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Product	Mouse anti-SUR2A monoclonal
Clone	S319A-14
Immunogen	Fusion protein amino acids 1505-1546 (SSIVDAGLVLVFSEGILVECDTGPNLLQH KNGLFSTLVMTNK, cytoplasmic C-terminus) of mouse SUR2A, accession number P70170.
Host and Subclass	Mouse monoclonal, IgG _{2A}
Cited Applications	WB, ICC, IHC
Specificity	Detects ~120kDa. Does not cross-react with SUR2B.
Species cross-reactivity	Mouse, Rat
Format	Protein G Purified. In PBS pH7.4, 50% glycerol and 0.09% sodium azide.
Concentration	1mg/mL
Storage and stability	-20 °C; 1 year+; shipped on cold packs or ambient

The primary function of the sulfonylurea receptor is to sense intracellular levels of the nucleotides ATP and ADP and in response facilitate the open or closing its associated K_{ir}6.x potassium channel. Hence the K_{ATP} channel monitors the energy balance within the cell (2).

Selected References

1. Campbell J.D., Sansom M.S., Ashcroft F.M. (2003) *EMBO Resp.* 4(11): 1038-1042.
2. Nichols C.G. (2006) *Nature.* 440 (7083): 470-476.

Certificate of Analysis

1µg/mL of SMC-431 was sufficient for detection of SUR2A in 20µg of mouse brain membrane lysate and assayed by colorimetric immunoblot analysis using goat anti-mouse IgG:HRP as the secondary antibody.

Scientific Background

Sulfonylurea receptors (SUR) are membrane proteins which are the molecular targets of the sulfonylurea class of antidiabetic drugs whose mechanism of action is to promote insulin release from pancreatic beta cells. More specifically, SUR proteins are subunits of the inward-rectifier potassium ion channels K_{ir}6.x (6.1 and 6.2) (1). The association of four K_{ir}6.x and four SUR subunits form an ion conducting channel commonly referred to as the K_{ATP} channel.

Material Safety Data Sheet

Anti- SUR2A (Monoclonal Antibody) SMC-431

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The below information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. StressMarq shall not be held liable for any damage resulting from handling or from contact with the above product. See the Technical Specification, Packing Slip, Invoice, and Product Catalogue for additional terms and conditions of sale.

Hazardous Ingredients

The physical, chemical and toxicological properties of these components have not been fully investigated. It is recommended that all laboratory personnel follow standard laboratory safety procedures when handling this product. Safety procedures should include wearing OSHA approved safety glasses, gloves and protective clothing. Direct physical contact with this product should be avoided.

<u>Known Hazardous Components</u>	<u>CAS Number</u>	<u>Percent</u>
Sodium Azide	26628-22-8	0.09

Physical Data

This product consists of mouse immunoglobulin in PBS containing 0.09% azide in 50% glycerol, shipped on gel packs. The physical properties of this product have not been investigated thoroughly.

Fire and Explosion Hazard and Reactivity Data

NOT APPLICABLE

Toxicological Properties

May be harmful by inhalation, ingestion, or skin absorption. The toxicological properties of this product have not been investigated thoroughly. Exercise due caution.

Preventative Measures

Wear chemical safety goggles and compatible chemical-resistant gloves. Avoid inhalation, contact with eyes, skin or clothing.

Spill and Leak Procedures

Observe all federal, state and local environmental regulations.

- Wear protective equipment.
- Absorb on sand or vermiculite and place in closed containers for disposal.
- Dispose or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

First Aid Measures

- If swallowed, wash out mouth with water, provided person is conscious. Call a physician.
- In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. If a rash or other irritation develops, call a physician.
- If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
- In case of eye contact, flush with copious amounts of water for at least 15 minutes while separating the eyelids with fingers. Call a physician.