10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Sgms1 Antibody - middle region

Rabbit Polyclonal Antibody
Catalog # AI13800

Product Information

Application	WB
Primary Accession	Q8VCQ6
Other Accession	NM_144792, NP_659041
Reactivity	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Dog, Guinea Pig, Horse, Bovine
Predicted	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Dog, Guinea Pig, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	49317

Additional Information

Gene ID	208449
Alias Symbol	9530058O11Rik, AI841905, C80702, MGC30540, Mob, Sms1, Sor1, Tmem23
Other Names	Phosphatidylcholine:ceramide cholinephosphotransferase 1, 2.7.8.27, Protein Mob, Sphingomyelin synthase 1, Transmembrane protein 23, Sgms1, Tmem23
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-Sgms1 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	Sgms1 Antibody - middle region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

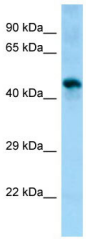
Name	Sgms1
Synonyms	Tmem23
Function	Major sphingomyelin synthase at the Golgi apparatus. Catalyzes the reversible transfer of phosphocholine moiety in sphingomyelin biosynthesis: in the forward reaction transfers phosphocholine head group of phosphatidylcholine (PC) on to ceramide (CER) to form ceramide phosphocholine (sphingomyelin, SM) and diacylglycerol (DAG) as by-product, and in the reverse reaction transfers phosphocholine from SM to DAG to form PC and CER. The direction of the reaction depends on the levels of CER and DAG in Golgi membranes. Converts the newly synthesized CER, that is

	transported from the endoplasmic reticulum to the trans-Golgi by the Cer transport protein (CERT), to SM. Can form a heteromeric complex with glucosylceramide synthase (GCS) increasing SMS activity and reducing glucosylceramide synthesis, a critical mechanism that controls the metabolic fate of CER in the Golgi (By similarity). Does not use free phosphorylcholine or CDP-choline as donor. Can also transfer phosphoethanolamine head group of phosphatidylethanolamine (PE) on to CER to form ceramide phosphoethanolamine (CPE) (PubMed:25605874). Regulates receptor-mediated signal transduction via mitogenic DAG and proapoptotic CER, as well as via SM, a structural component of membrane rafts that serve as platforms for signal transduction and protein sorting (PubMed:16879426, PubMed:22580896). Plays a role in secretory transport via regulation of DAG pool at the Golgi apparatus and its downstream effects on PRKD1 (By similarity).
Cellular Location	Golgi apparatus membrane {ECO:0000250|UniProtKB:Q86VZ5}; Multi-pass membrane protein
Tissue Location	Isoform 1 is widely expressed, isoform 2 shows a more narrow distribution and isoform 3 is detected only in testis and heart.

References

Yang Z.,et al.Gene 363:123-132(2005).
Carninci P.,et al.Science 309:1559-1563(2005).
Huitema K.,et al.EMBO J. 23:33-44(2004).
Yang Z.,et al.FEMS Yeast Res. 6:751-762(2006).
Li Z.,et al.Arterioscler. Thromb. Vasc. Biol. 32:1577-1584(2012).

Images



WB Suggested Anti-Sgms1 Antibody Titration: 1.0 µg/ml
Positive Control: Mouse Muscle