abcam

ab314194

Anti-Somatostatin Receptor 2 antibody [7A9] - Human IgG1 (Chimeric)

Recombinant | Advanced Validation

Key facts

Isotype	IgG1
Host species	Human
Storage buffer	pH: 7.4 Preservative: 0.03% Proclin 300 Constituents: PBS, 50% Glycerol (glycerin, glycerine)
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Full Length Protein corresponding to Human SSTR2. Database link P30874
Clone number	7A9
Purification technique	Affinity purification
Specificity	We only have data for transfected human samples, we currently have no endogenous data.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human

Dilution info	1/50 - 1/200
Notes	-

FuncS

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information SSTR2

Function	Receptor for somatostatin-14 and -28. This receptor is coupled via pertussis toxin sensitive G proteins to inhibition of adenylyl cyclase. In addition it stimulates phosphotyrosine phosphatase and PLC via pertussis toxin insensitive as well as sensitive G proteins. Inhibits calcium entry by suppressing voltage-dependent calcium channels. Acts as the functionally dominant somatostatin receptor in pancreatic alpha- and beta-cells where it mediates the inhibitory effect of somatostatin-14 on hormone secretion. Inhibits cell growth through enhancement of MAPK1 and MAPK2 phosphorylation and subsequent up-regulation of CDKN1B. Stimulates neuronal migration and axon outgrowth and may participate in neuron development and maturation during brain development. Mediates negative regulation of insulin receptor signaling through PTPN6. Inactivates SSTR3 receptor function following heterodimerization.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The somatostatin receptor 2 (SSTR2) also known as SS2R serves as a G protein-coupled receptor with a molecular mass of approximately 40-60 kDa. SSTR2 specifically binds somatostatin a peptide hormone that regulates the endocrine system neurotransmission and cell proliferation via interaction with various somatostatin receptors. Scientists find SSTR2 expressed in high levels in the pituitary gland central nervous system gastrointestinal tract and pancreatic cells.
Biological function summary	Somatostatin receptor 2 mediates the inhibitory effects of somatostatin on cell growth and the release of other hormones. It functions as part of the receptor complex modulating intracellular signaling pathways. SSTR2 often interacts closely with other molecules like G proteins to inhibit adenylyl cyclase reducing cyclic AMP (cAMP) levels and influencing diverse cellular responses. The receptor's ability to influence such processes emphasizes its role in maintaining cellular and systemic homeostasis.
Pathways	Somatostatin receptor 2 plays an important role in the inhibitory signaling pathways related to growth hormone regulation and neurotransmitter release. SSTR2 actively participates in the somatostatin signaling pathway intimately interacting with proteins such as adenylate cyclase and phospholipase C. Another important pathway includes the regulation of the MAPK pathway serving to modulate cell proliferation and survival reiterating its regulatory function within endocrine signaling and cellular communication.
Associated diseases and disorders	Somatostatin receptor 2 demonstrates significant involvement in neuroendocrine tumors and acromegaly. The overexpression of SSTR2 in neuroendocrine tumors provides a valuable target for diagnostic imaging and therapeutic interventions using somatostatin analogs. In acromegaly where excess growth hormone production occurs SSTR2's modulation of growth hormone release becomes important; it often works alongside growth hormone receptors and IGF-1 to limit abnormal growth. Therefore the receptor's targeting offers therapeutic potential and advances disease understanding.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

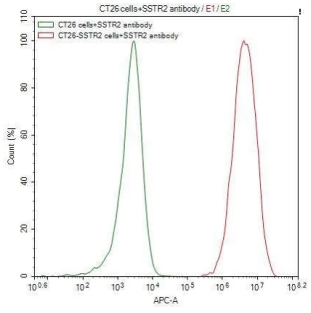
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

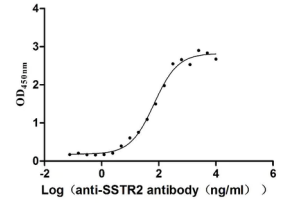
Full details and terms and conditions can be found here:
Terms & Conditions.

2 product images



Flow Cytometry - Anti-Somatostatin Receptor 2 antibody [7A9] - Human IgG1 (Chimeric) (ab314194)

Untransfected CT26 cells (green line) and transfected human Somatostatin Receptor 2 CT26 stable cells (red line) were stained with ab314194 (2µg/1x10E6 cells), washed and then followed by APC-conjugated anti-Human IgG Fc antibody and analyzed with flow cytometry.



Functional Studies - Anti-Somatostatin Receptor 2 antibody [7A9] - Human IgG1 (Chimeric) (ab314194)

The binding activity of human Somatostatin Receptor 2 with ab314194. Activity: Measured by its binding ability in a functional ELISA. Immobilized human Somatostatin Receptor 2 at 10 µg/mL can bind ab314194, the EC50 is 58.13-81.28 ng/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.