

ST (H-8): sc-518084

BACKGROUND

The members of the G protein-coupled receptor family are distinguished by their slow transmitting response to ligand binding. These seven transmembrane proteins include the adrenergic, serotonin and dopamine receptors. The effect of the signaling molecule can be excitatory or inhibitory depending on the type of receptor to which it binds. Members of the β -Arrestin family regulate receptor binding to G proteins. β -Arrestins have been found to be located at postsynaptic sites, where they are thought to act in concert with β ARK (β ARK1, also designated GRK 2, or β ARK2, also designated GRK 3) to regulate G protein-coupled neurotransmitter receptors. Expression of β -Arrestin-1 and β -Arrestin-2 is seen predominantly in spleen and neuronal tissues. It has been shown that β -Arrestin-1 expression is modulated by intracellular cAMP, which may be a novel mechanism for the regulation of receptor-mediated responses. The Na/Cl dependent ST (SLC6A4) functions to clear serotonin from the synaptic cleft. Many tricyclic antidepressants and serotonin selective reuptake inhibitors appear to act on this transporter. SSRIs function by increasing the amount of time serotonin remains in the synaptic cleft. The presence of active ST is vital for proper emotional development within the brain.

REFERENCES

1. Cotecchia, S., et al. 1990. Multiple second messenger pathways of β -adrenergic receptor subtypes expressed in eukaryotic cells. *J. Biol. Chem.* 265: 63-69.
2. Levy, F.O., et al. 1992. Molecular cloning of a human gene (S31) encoding a novel serotonin receptor mediating inhibition of adenylyl cyclase. *FEBS Lett.* 296: 201-206.
3. Ramamoorthy, S., et al. 1993. Antidepressant- and cocaine-sensitive human serotonin transporter: molecular cloning, expression, and chromosomal localization. *Proc. Natl. Acad. Sci. USA* 90: 2542-2546.
4. Hediger, M.A., et al. 1995. Mammalian ion-coupled solute transporters. *J. Physiol.* 482: 7S-17S.
5. Barak, L.S., et al. 1995. The conserved seven-transmembrane sequence NP(X)2,3Y of the G protein-coupled receptor superfamily regulates multiple properties of the β_2 -adrenergic receptor. *Biochemistry* 34: 15407-15414.
6. Pandey, S.C., et al. 1995. Phosphoinositide system-linked serotonin receptor subtypes and their pharmacological properties and clinical correlates. *J. Psychiatry Neurosci.* 20: 215-225.

CHROMOSOMAL LOCATION

Genetic locus: SLC6A4 (human) mapping to 17q11.2.

SOURCE

ST (H-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 69-88 within an N-terminal cytoplasmic domain of ST of human origin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ST (H-8) is available conjugated to agarose (sc-518084 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518084 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518084 PE), fluorescein (sc-518084 FITC), Alexa Fluor[®] 488 (sc-518084 AF488), Alexa Fluor[®] 546 (sc-518084 AF546), Alexa Fluor[®] 594 (sc-518084 AF594) or Alexa Fluor[®] 647 (sc-518084 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-518084 AF680) or Alexa Fluor[®] 790 (sc-518084 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

ST (H-8) is recommended for detection of ST of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

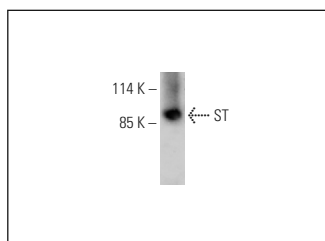
Suitable for use as control antibody for ST siRNA (h): sc-36565, ST shRNA Plasmid (h): sc-36565-SH and ST shRNA (h) Lentiviral Particles: sc-36565-V.

Molecular Weight of ST: 70 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



ST (H-8): sc-518084. Western blot analysis of human recombinant ST.

RESEARCH USE

For research use only, not for use in diagnostic procedures.