Anti-Phospho-Thr^{276} Serotonin Transporter (SERT) Antibody

Catalog #: p1700-276  Size: 100 µl

Cite this Antibody: PhosphoSolutions Cat# p1700-276, RRID:AB_2492237

Product Description: Affinity purified rabbit polyclonal antibody.

Biological Significance: The serotonin transporter (SERT) recycles serotonin by transporting it back to the pre-synaptic cell. It is the primary target for most anti-depressant drugs and for stimulants such as methamphetamines. SERT is regulated by several processes, including a cyclic GMP signaling pathway involving nitric oxide synthase, guanylyl cyclase, and cGMP-dependent protein kinase (PKG). cGMP- and PKG-mediated SERT regulation requires phosphorylation at thr^{276} (Ramamoorthy et al., 2007). It has been suggested that although PKG is involved in the stimulation of SERT at thr^{276}, it does not directly phosphorylate the residue, rather it initiates a kinase cascade that leads to SERT phosphorylation by an as yet unidentified protein kinase (Wong et al., 2012). Also of therapeutic importance, mutation at the thr^{276} residue has been shown to decrease the potency of a variety of anti-depressant drugs, (Zhang YW and Rudnick G, 2005).

Antigen: Phosphopeptide corresponding to amino acid residues surrounding the phospho-Thr^{276} of rat SERT.

Antibody Specificity: Specific for endogenous levels of the ~76 kDa SERT protein phosphorylated at Thr^{276}. Immunolabeling is blocked by preadsorption with the phosphopeptide used as antigen, but not by the corresponding non-phosphopeptide.

Purification Method: Prepared from pooled rabbit serum by affinity purification via sequential chromatography on phospho and non-phosphopeptide affinity columns.

Quality Control Tests: Western blots performed on each lot.

Packaging: 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg BSA per ml and 50% glycerol.

Storage and Stability: Shipped on blue ice. Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.

Western blot of rat mid brain membrane lysate showing specific immunolabeling of the ~76 kDa SERT protein phosphorylated at Thr^{276} in the first lane (-). Phosphospecificity is shown in the second lane (+) where immunolabeling is blocked by preadsorption of the phosphopeptide used as antigen, but not by the corresponding non-phosphopeptide (not shown).
Product Specific References:


General References:

