**Anti-Phospho-Thr^{53} Dopamine Transporter (DAT)**

**Catalog Number:** p435-53  
**Size:** 100 µl

**Product Description:** Affinity purified rabbit polyclonal antibody

**Applications:**  
WB: 1:1000

**Antigen:** Phosphopeptide corresponding to amino acid residues surrounding the phospho-Thr^{53} of rat DAT.

**Species reactivity:** The antibody has been directly tested for reactivity in Western blots with rat tissue.

**Biological Significance:** The dopamine transporter (DAT) is responsible for the reaccumulation of dopamine after it has been released. DAT antibodies and antibodies for other markers of catecholamine biosynthesis are widely used as markers for dopaminergic and noradrenergic neurons in a variety of applications including depression, schizophrenia, Parkinson’s disease and drug abuse (Kish et al., 2001; Zhu et al., 2000; Zhu et al., 1999). Levels of DAT protein expression are altered by chronic drug administration (Wilson et al., 1996). It has been shown that phosphorylation at Thr^{53} directly affects dopamine influx and amphetamine-stimulated substrate efflux, indicating that the Thr^{53} residue plays a major role in transport activity (Foster et al., 2012).

**Anti-Phospho-Thr^{53} DAT**

Western blot of rat caudate lysate showing specific immunolabeling of the ~55k glycosylated form of the DAT protein phosphorylated at Thr^{53}. Immunolabeling is blocked by the phospho-peptide used as antigen (peptide), but not by the corresponding dephospho-peptide (not shown).

**WB = Western Blot  IF = Immunofluorescence  IHC = Immunohistochemistry  IP = Immunoprecipitation**

**Packaging:** 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per ml BSA and 50% glycerol. Adequate amount of material to conduct 10-mini Western Blots.

**Storage and Stability:** Store at −20°C; stable for at least one year.

**Shipment:** Domestic - Blue Ice; International - Blue Ice or Dry Ice.
**Purification Method:** Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

**Antibody Specificity:** Specific for the ~55k glycosylated form of the DAT protein phosphorylated at Thr\(^{53}\). Relative mobility may vary depending on the state of glycosylation of the DAT protein. The antibody works best in lysates that have not been boiled prior to being run on an SDS-PAGE gel. Immunolabeling of the DAT band is blocked by preadsorption with the phospho-peptide used as antigen but not by the corresponding dephospho-peptide.

**Quality Control Tests:** Western blots performed on each lot.

**Product Specific References:**


**General References:**

