

Anti-Phospho-Thr53 Dopamine Transporter Antibody

Product Data Sheet · P/N 74089 Rev 01 · Reissued 2026-09-19 (layout only)

Product code	Pack size
P40007-100	100 µL
Host Species	Rabbit (Polyclonal)
Mr (kDa)	55

Description

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 Thr53 directly affects dopamine influx and amphetamine-stimulated substrate efflux, indicating that the Thr53 residue plays a major role in transport activity (Foster et al., 2012).

Immunogen

Phosphopeptide corresponding to amino acid residues surrounding the phospho-Thr53 of rat DAT. Specific for the ~55k glycosylated form of the DAT protein phosphorylated at Thr53.

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.

Species Reactivity

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

Physical State

Liquid; Buffer contents: 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per mL BSA and 50% glycerol

Purification Method

Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

Recommended Antibody Dilutions

WB: 1:1000

Storage/Stability

Stable at -20 °C for at least 1 year.

For long term storage -20 °C is recommended

Shipping Conditions

Domestic: Blue Ice

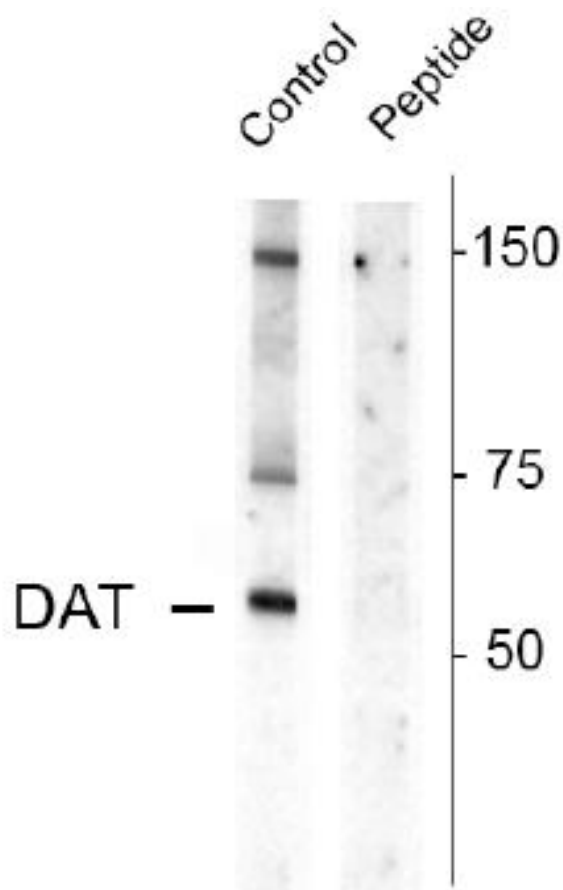
International: Blue Ice or Dry Ice

References

- 1) Kish SJ et al. (2001) Neuropsychopharmacology 24:561-567.
- 2) Wilson JM et al. (1996) Nat Med 2:699-703.

3) Zhu MY et al. (2000) J Neurosci Meth 99:37-44.

4) Zhu MY et al. (1999) Biol Psychiatry 46:1275-1286.



Western Blot Rat caudate lysate showing specific immunolabeling of the ~55k glycosylated form of the DAT protein phosphorylated at Thr53. Immunolabeling is blocked by the phospho-peptide used as antigen (peptide), but not by the corresponding dephospho-peptide (not shown).

For research use or further manufacturing only. Not for use in diagnostic procedures, or for human or animal consumption.