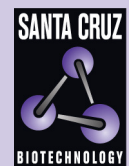


# TPMT (H-78): sc-135249



The Power to Question

## BACKGROUND

Thiopurine S-methyltransferase (TPMT), also designated thiopurine methyltransferase, acts as a catalyst for the S-methylation of thiopurine drugs such as 6-mercaptopurine. TPMT, usually found as a monomer, is inhibited by S-adenosyl-L-homocysteine. It is a cytoplasmic protein belongs to the TPMT subfamily of the larger methyltransferase superfamily of proteins. TPMT activity varies among different ethnic groups, with a large majority of caucasians having a high TPMT activity. A common genetic polymorphism controls the level of TPMT activity. The level of TPMT activity is associated with the variation in efficacy and toxicity of thiopurine drugs.

## REFERENCES

1. Kelleher, D., et al. 2004. Pharmacogenetics of inflammatory bowel disease. *Novartis Found. Symp.* 263: 41-53.
2. Ford, L., et al. 2004. Whose TPMT activity is it anyway? *Ann. Clin. Biochem.* 41: 498-500.
3. Khalil, M.N., et al. 2005. Interference free and simplyfied liquid chromatography-based determination of thiopurine S-methyltransferase activity in erythrocytes. *J. Chromatogr. B Analyt. Technol. Biomed. Life Sci.* 821: 105-111.
4. Okada, Y., et al. 2005. Genotyping of thiopurine methyltransferase using pyrosequencing. *Biol. Pharm. Bull.* 28: 677-681.
5. Heckmann, J.M., et al. 2005. Thiopurine methyltransferase (TPMT) heterozygosity and enzyme activity as predictive tests for the development of azathioprine-related adverse events. *J. Neurol. Sci.* 231: 71-80.
6. Stanulla, M., et al. 2005. Thiopurine methyltransferase (TPMT) genotype and early treatment response to mercaptopurine in childhood acute lymphoblastic leukemia. *JAMA* 293: 1485-1489.
7. Sayani, F.A., et al. 2005. Thiopurine methyltransferase enzyme activity determination before treatment of inflammatory bowel disease with azathioprine: effect on cost and adverse events. *Can. J. Gastroenterol.* 19: 147-151.

## CHROMOSOMAL LOCATION

Genetic locus: TPMT (human) mapping to 6p22.3; *Tpmt* (mouse) mapping to 13 A5.

## SOURCE

TPMT (H-78) is a rabbit polyclonal antibody raised against amino acids 38-115 mapping within an internal region of TPMT of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

TPMT (H-78) is recommended for detection of TPMT of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

TPMT (H-78) is also recommended for detection of TPMT in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TPMT siRNA (h): sc-61701, TPMT siRNA (m): sc-61702, TPMT shRNA Plasmid (h): sc-61701-SH, TPMT shRNA Plasmid (m): sc-61702-SH, TPMT shRNA (h) Lentiviral Particles: sc-61701-V and TPMT shRNA (m) Lentiviral Particles: sc-61702-V.

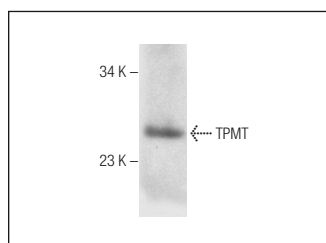
Molecular Weight of TPMT: 32 kDa.

Positive Controls: human bone marrow extract: sc-363752, HEL 92.1.7 cell lysate: sc-2270 or TF-1 cell lysate: sc-2412.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



TPMT (H-78): sc-135249. Western blot analysis of TPMT expression in human bone marrow tissue extract.

## RESEARCH USE

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

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Satisfaction  
Guaranteed

Try **TPMT (E-8): sc-374154**, our highly recommended monoclonal alternative to TPMT (H-78).