Revision 4

#15571 Store at -20C

TFF1/pS2 (D2Y1J) Rabbit mAb

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IHC-P	H	Endogenous	13	Rabbit IgG	#P04155	7031

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunohistochemistry (Paraffin)	1:150

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #72033.

Specificity / Sensitivity

TFF1/pS2 (D2Y1J) Rabbit mAb recognizes endogenous levels of total TFF1/pS2 protein. This antibody does not cross-react with either TFF2 or TFF3 proteins.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val33 of human TFF1/pS2 protein.

Background

The trefoil factor (TFF) family of proteins (TFF1/pS2, TFF2, and TFF3) are a group of highly conserved, secreted polypeptides that are expressed by mucus-secreting cells of the gastrointestinal tract. Within the gastrointestinal tract, TFFs display both common and distinct expression patterns (1). Collectively, the TFF family of proteins play a prominant role in the protection and repair of the mucous epithelia lining the gastrointestinal tract through their interactions with mucins (2). TFFs have been shown to regulate a number of cellular processes such as migration, apoptosis, and proliferation. In humans, dysregulated expression of TFFs has been observed in inflammatory bowel diseases as well as tumors of the breast, colon, lung, and stomach (2).
TFF1/pS2 is a gastric peptide that is highly expressed by mucosal goblet cells of the stomach, where it is thought to play a role in maintaining the integrity of the epithelial layer of the mucosa through the regulation of cell-cell adhesion and cell migration (2,3). Research studies have shown that TFF1 functions as a tumor suppressor in the stomach as its expression is frequently lost in gastric carcinomas, largely due to promoter hypermethylation (4-8). Research studies have also demonstrated that *TFF1* is a transcriptional target of estrogen receptor-α and that TFF1 expression in breast carcinoma may be used as a predictive biomarker for response to anti-estrogen therapy (9,10).

Background References

1. Madsen, J. et al. (2007) *J Histochem Cytochem* 55, 505-13.
2. Taupin, D. and Podolsky, D.K. (2003) *Nat Rev Mol Cell Biol* 4, 721-32.
3. Taupin, D. et al. (2001) *Lab Invest* 81, 397-408.
4. Carvalho, R. et al. (2002) *Lab Invest* 82, 1319-26.
5. Katoh, M. (2003) *Int J Mol Med* 12, 3-9.
6. McChesney, P.A. et al. (2006) *Cancer Res* 66, 1346-53.
7. Mashimo, H. et al. (1996) *Science* 274, 262-5.
8. Lefebvre, O. et al. (1996) *Science* 274, 259-62.
9. May, F.E. and Westley, B.R. (2015) *Endocr Relat Cancer* 22, 465-79.
10. Corte, M.D. et al. (2006) *Breast Cancer Res Treat* 96, 63-72.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IHC-P:** Immunohistochemistry (Paraffin)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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Limited Uses