Revision 3

#14481 Store at -20C

CD39/NTPDase 1 (E2X6B) XP® Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IHC-P	M	Endogenous	80	Rabbit IgG	#P55772	12495

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunohistochemistry (Paraffin)	1:200

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.

Specificity / Sensitivity

CD39/NTPDase 1 (E2X6B) XP® Rabbit mAb recognizes endogenous levels of total NTPDase 1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Lys307 of mouse NTPDase 1 protein.

Background

Ectonucleoside triphosphate diphosphohydrolase 1 (NTPDase 1, also known as CD39) is a multi-pass membrane ectoenzyme that metabolizes adenosine-5'-triphosphate (ATP) to regulate purinergic signaling. Purinergic signaling by extracellular ATP and its metabolites regulate many biological processes, including vascular tone, digestion, neuronal function, and inflammation in both normal and diseased states (1). NTPDase 1 is expressed in endothelial cells in the vasculature to regulate local platelet purinergic signaling via metabolism of ATP to adenosine (2). Accordingly, NTPDase 1 regulates platelet activation aggregation and contributes to the antithrombotic properties of endothelial cells (3). ATP and its metabolites also finely modulate the activity of T cells and macrophages (4,5). Immunomodulation is regulated, in part, by the availability of extracellular ATP and adenosine, suggesting that NTPDase 1 (CD39) may play an immunosuppressive role in the tumor microenvironment.

Background References

1. Burnstock, G. and Ralevic, V. (2014) *Pharmacol Rev* 66, 102-92.
2. Kauffenstein, G. et al. (2010) *Cardiovasc Res* 85, 204-13.
3. Pinsky, D.J. et al. (2002) *J Clin Invest* 109, 1031-40.
4. Ohradanova-Repic, A. et al. (2018) *Front Immunol* 9, 852.
5. Deaglio, S. et al. (2007) *J Exp Med* 204, 1257-65.

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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