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#94871**Adora2a/Adenosine Receptor A2a (E5I8X)
XP[®] Rabbit mAb****Orders:** 877-616-CELL (2355)
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Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
IHC-P, IF-F	M R	Endogenous	Rabbit IgG	#Q60613	11540

Product Usage Information**Application**Immunohistochemistry (Paraffin)
Immunofluorescence (Frozen)**Dilution**1:400
1:50**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 #30893.

Specificity/SensitivityAdora2a/Adenosine Receptor A2a (E5I8X) XP[®] Rabbit mAb recognizes endogenous levels of total rodent A2AR protein. This antibody does not cross-react with human A2AR protein.**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala401 of mouse A2AR protein.

Background

Adenosine Receptor A2a (A2AR) is a G-protein-coupled receptor (GPCR). As a member of the purinergic adenosine receptors (A1, A2, and A3), A2AR activates classic G-protein signaling pathways upon binding of adenosine (1). Adenosine is present in all cells and extracellular fluids. Adenosine signaling, via A2AR, is mobilized during both physiological and pathological conditions. For example, adenosine, via A2AR, modulates neuronal function, acting to fine-tune neuronal function (2). A2AR function is modulated, in part, by its ability to form functional heteromers with other GPCRs, including dopamine receptors (D1 and D3), metabotropic glutamate receptors (mGluR5), and others (3). In the brain, A2AR is enriched in the basal ganglia, suggesting that A2AR may be a potential drug target for neurodegenerative diseases like Parkinson's disease, drug addiction, and psychiatric disorders (4). Outside of the brain, A2AR may act as an immune checkpoint molecule to maintain an immunosuppressive tumor microenvironment, an environment that exhibits relatively elevated adenosine levels (5,6).

Background References

1. Le, F. et al. (1996) *Biochem Biophys Res Commun* 223, 461-7.
2. Sulli, G. et al. (2018) *Trends Pharmacol Sci* 39, 812-27.
3. Verzijl, D. and Ijzerman, A.P. (2011) *Purinergic Signal* 7, 171-92.
4. Bogenpohl, J.W. et al. (2012) *J Comp Neurol* 520, 570-89.
5. Menzel, S. et al. (2018) *Front Pharmacol* 9, 266.
6. Leone, R.D. et al. (2015) *Comput Struct Biotechnol J* 13, 265-72.

Species Reactivity

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

Applications Key**IHC-P:** Immunohistochemistry (Paraffin) **IF-F:** Immunofluorescence (Frozen)**Cross-Reactivity Key****M:** Mouse **R:** Rat**Trademarks and Patents**

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