



# SZABO SCANDIC

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## Produktinformation



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# Product Information



## Adenosine Receptor A<sub>2A</sub> Blocking Peptide

Item No. 10092

Adenosine Receptor A<sub>2A</sub> is a multi-pass membrane protein that is normally localized to the plasma membrane.<sup>1</sup> This receptor is part of the G protein-coupled receptor family that binds adenosine and keeps it in equilibrium inside and outside the cell. Along with establishing this equilibrium, A<sub>2A</sub>R serves multiple functions and antagonists of this receptor have been targeted for the treatment of Parkinson's disease.<sup>2,3</sup> This protein is primarily found in the striatum, but can also be found in immune cells and other tissues as well.<sup>2</sup> A<sub>2A</sub>R is 412 amino acids long with an expected molecular weight of 45kDa. The receptor also has multiple glycosylation sites that explain the higher band shift seen in western blotting.<sup>1</sup>

### Laboratory Procedures

This vial contains 200 µg of peptide in 200 µl of TBS, pH 7.4, containing 0.1% BSA and 0.02% sodium azide. The Adenosine Receptor A<sub>2A</sub> blocking peptide (human adenosine receptor A<sub>2A</sub> amino acids 213-220) can be used in conjunction with Cayman's Adenosine Receptor A<sub>2A</sub> Monoclonal Antibody (Catalog No. 10011454) to block protein-antibody complex formation during the immunochemical analysis of Adenosine Receptor A<sub>2A</sub>.

Store this peptide solution at -20°C. It will be stable for at least one year. To block antibody/protein complex formation, the following procedure is recommended:

1. Mix the monoclonal antibody and blocking peptide together in a 1:5 (v/v) ratio in a microfuge tube. For example, mix 10 µl of antibody and 50 µl of peptide.\*
2. Incubate for one hour at room temperature with occasional mixing.
3. Dilute the reagents to the final working antibody concentration and apply to the slide or membrane as usual.

\*This is a recommended mixture. The minimum amount of peptide needed for complete blocking has not been precisely determined and may vary depending on the sample being analyzed. The amount of peptide required may need to be increased if sufficient blocking does not occur.

### References

1. Piersen, C.E., True, C.D., and Well, J.N. A carboxyl-terminally truncated mutant and nonglycosylated A<sub>2A</sub> adenosine receptors retain ligand binding. *Mol. Pharmacol.* **45**(5), 861-870 (1994).
2. Fredholm, B.B., Chern, Y., Franco, R., *et al.* Aspects of the general biology of adenosine A<sub>2A</sub> signaling. *Prog. Neurobiol.* **83**, 263-276 (2007).
3. Ledent, C., Vaugeois, J.-M., Schiffmann, S.N., *et al.* Aggressiveness, hypoalgesia and high blood pressure in mice lacking the adenosine A<sub>2A</sub> receptor. *Nature* **388**, 674-678 (1997).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/10092](http://www.caymanchem.com/catalog/10092)

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**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY. NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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