

# DATASHEET

## LUF7960

### Product overview

**Name** LUF7960  
**Cat No** HB8396  
**Biological description** Novel, adenosine A<sub>3</sub>AR Affinity-Based Probe (AfBP) which is suitable for click conjugation for use in confocal microscopy, SDS-PAGE and detection of endogenous hA<sub>3</sub>AR in flow cytometry.

Binds covalently to the hA<sub>3</sub>AR (apparent pK<sub>i</sub> values at A<sub>1</sub>AR are 7.27 and 8.4 (following a 4h preincubation))

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**Biological action** Agonist  
**Purity** >98%  
**Description** Novel, clickable Adenosine hA<sub>3</sub>AR Affinity-Based Probe (AfBP).

### Images

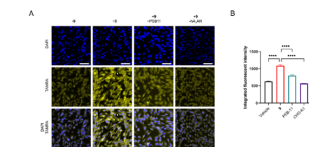
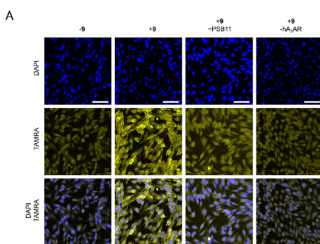


Figure 4. Labeling of the hA<sub>3</sub>AR observed by confocal microscopy. CHO cells with (CHO+hA<sub>3</sub>AR) or without (CHO-KI) stable expression of the hA<sub>3</sub>AR were pre-incubated for 4h with PBS (1 μM final concentration) or 9 (PSB11) (control) and incubated for 40 min with or without TAMRA (click reagent). Cells were fixed, permeabilized, and subjected to a copper-catalyzed click reaction with TAMRA (1 μM final concentration). The cells were then washed and kept in PBS containing 200 μM DAPI during confocal imaging. (A) Shows an image showing blue DAPI staining of nuclei, green TAMRA staining of hA<sub>3</sub>AR, and merged images of both channels (right row). Images were acquired sequentially, at a distance of 100 nm in the z-axis. (B) Comparison of the integrated fluorescence intensity between treatment conditions. Data were obtained from 2 x 4 fields of view. Data were quantified in triplicate. Each data point represents the integrated fluorescence intensity of the TAMRA signal per individual cell. Shown is the bar graph as the average integrated fluorescence intensity of all individual cells. Error bars represent SEM. Significance was calculated using a one-way ANOVA test using multiple comparisons. A significant increase in intensity is observed for the cells containing the hA<sub>3</sub>AR and treated with 9, versus the other conditions.

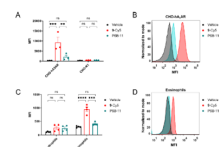
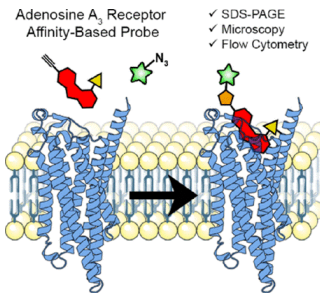


Figure 5. Labeling of the hA<sub>3</sub>AR in flow cytometry experiments. Samples were pre-incubated for 4h with the antagonist PSB-11 and incubated for 40 min with or without 9 in a CHO background. (A) CHO samples were denatured and subjected to SDS electrophoresis for denaturation. (B) CHO cells were immunoprecipitated with anti-hA<sub>3</sub>AR antibody and subjected to SDS electrophoresis. (C) CHO cells with (CHO+hA<sub>3</sub>AR) and without (CHO-KI) stable expression of the hA<sub>3</sub>AR. Values represent the mean ± SEM of three independent experiments performed in duplicate. Significance was calculated by a one-way ANOVA test using multiple comparisons (\*\*p < 0.01; \*\*\*p < 0.001; ns = not significant). (D) Representative graph showing the observed shift in SDS-stained hA<sub>3</sub>AR binding in CHO cells. (E) SDS-PAGE gel showing hA<sub>3</sub>AR labeling in CHO cells with (CHO+hA<sub>3</sub>AR) and without (CHO-KI) stable expression of the hA<sub>3</sub>AR. Values represent the mean ± SEM of three independent experiments. Significance was calculated by a one-way ANOVA test using multiple comparisons (\*\*p < 0.01; \*\*\*p < 0.001; ns = not significant). (F) Representative graph showing the observed shift in SDS-stained hA<sub>3</sub>AR binding in CHO cells.

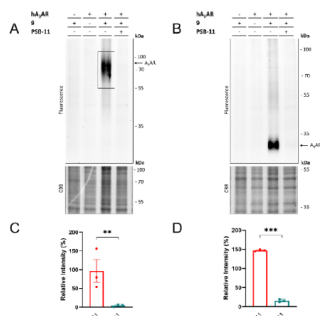


Figure 5. Labeling of the hA<sub>3</sub>AR on live CHO cells. CHO cells with or without (first lane) stable expression of the hA<sub>3</sub>AR were pre-incubated for 1 h with antagonist (PSB-11, 1 μM final concentration) at 37 °C, prior to incubation with 9 (50 nM final concentration) for 1 h at 37 °C. After the incubation, the unbound probe was washed away with PBS. Membranes were prepared, brought to a concentration of 1 μg/μL, and subjected to the copper-catalyzed click reaction with Cy5-N<sub>2</sub> (1 μM final concentration). Samples were then denatured with Laemmli buffer (4x), resolved by SDS-PAGE, and imaged using gel fluorescence. Gels were stained by Coomassie Brilliant Blue (CBB) as loading control. (A) Labeling of glycosylated hA<sub>3</sub>AR. (B) Labeling of deglycosylated hA<sub>3</sub>AR. PNGase was added prior to the addition of click reagents. (C, D) Quantification of the observed signals with and without addition of antagonist (PSB-11). The band intensities were calculated using ImageLab and corrected for the amount of protein measured after CBB staining. The band at 55 kDa of the PageRuler Plus ladder (not shown) was set to 100% for each gel and band intensities were calculated relative to this band. The mean values ± SEM of three individual experiments are shown. Significance was calculated by a two-way ANOVA test using multiple comparisons (\*\*\*p < 0.001; \*\*p < 0.01).

### Solubility & Handling

**Storage instructions**  
**Important**

-20 °C

This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

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## Chemical Data

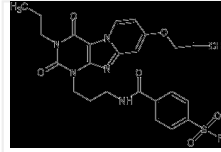
**Chemical name**

4-[3-(2,4-Dioxo-3-propyl-8-prop-2-ynoxypurino[7,8-a]pyridin-1-yl)propylcarbamoyl]benzenesulfonyl fluoride

**Molecular Weight**

541.55

**Chemical structure**



**Molecular Formula**

C<sub>25</sub>H<sub>24</sub>FN<sub>5</sub>O<sub>6</sub>S

**PubChem identifier**

168510594

**SMILES**

CCCN1C(=O)C2=C(N=C3N2C=CC(=C3)OCC#C)N(C1=O)CCCNC(=O)C4=CC=C(C=C4)S(=O)(=O)F

**InChiKey**

GQJPGXUBGVKCMG-UHFFFAOYSA-N

**Licensing details**

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## References

### Development of an Affinity-Based Probe to Profile Endogenous Human Adenosine A(3) Receptor Expression.

Beerkens BLH et al (2023) Journal of medicinal chemistry 66

**PubMedID**

[37531576](#)

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