# **PRODUCT** INFORMATION DUPA



Item No. 19501

CAS Registry No.:	302941-52-2		
Formal Name:	N,N'-carbonylbis-L-glutamic acid	о Н	н
MF:	C <sub>11</sub> H <sub>16</sub> N <sub>2</sub> O <sub>9</sub>		
FW:	320.3	HO	л N ОН
Purity:	≥95%	1	
Supplied as:	A solid		
Storage:	-20°C	HO	OH
Stability:	≥4 years		

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

DUPA is supplied as a solid. A stock solution may be made by dissolving the DUPA in the solvent of choice, which should be purged with an inert gas. DUPA is sparingly soluble (1-10 mg/ml) in ethanol and DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of DUPA can be prepared by directly dissolving the solid in aqueous buffers. DUPA is sparingly soluble (1-10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

### Description

DUPA is an inhibitor of prostate-specific membrane antigen (PSMA;  $IC_{50}$  = 47 nM for the glutamate carboxypeptidase activity).<sup>1</sup> It has been used as a ligand to target radiolabels, cytotoxic agents, and antibody-drug conjugates to cancer cells.<sup>2-4</sup>

### References

- 1. Kozikowski, A.P., Nan, F., Conti, P., et al. Design of remarkably simple, yet potent urea-based inhibitors of glutamate carboxypeptidase II (NAALADase). J. Med. Chem. 44(3), 298-301 (2001).
- 2. Kularatne, S.A., Wang, K., Santhapuram, H.-K.R., et al. Prostate-specific membrane antigen targeted imaging and therapy of prostate cancer using a PSMA inhibitor as a homing ligand. Mol. Pharm. 6(3), 780-789 (2009).
- 3. Kularatne, S.A., Venkatesh, C., Santhapuram, H.-K.R., et al. Synthesis and biological analysis of prostate-specific membrane antigen-targeted anticancer prodrugs. J. Med. Chem. 53(21), 7767-7777 (2010).
- 4. Kim, C.H., Axup, J.Y., Lawson, B.R., et al. Bispecific small molecule-antibody conjugate targeting prostate cancer. Proc. Natl. Acad. Sci. USA 110(44), 17796-17801 (2013).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

### WARRANTY AND LIMITATION OF REMEDY

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