

MATERIAL DATA SHEET

Ubiquitin, *plasmodium recombinant*

Cat. # U-100Pf

Highly purified ubiquitin free of glycine and buffer salts which can interfere with chemical and *in vitro* reactions. Ubiquitin is a 76 amino acid, highly conserved nuclear and cytoplasmic eukaryotic protein. It is covalently attached to substrate proteins by enzymes in the Ubiquitin-Proteasome Pathway (UPP). The major role of ubiquitination is to target cellular proteins for the ATP-dependent degradation by the 26S proteasome and proteasome-independent or regulatory events such as protein localization, activity and function. This protein sequence is for protozoan parasite *P.falciparum* (NP_701482) which causes malaria. Considering its conserved role among eukaryotes, this system is expected to regulate key molecular events driving the parasite life cycle, including parasite discrete apicomplexan mechanisms such as host cell invasion and apicoplast formation.

Product Information

Quantity:	5 mg, lyophilized powder
MW:	8.6 kDa
Solubility:	Aqueous solutions up to 20 mg/ml
Purity:	> 95% by SDS-PAGE

Protein Sequences

<i>H.sapiens</i> Ub	MQIFVKTLTGKTITLEVEPSDTIENVKAKIQDKEGIPPDQQLIFAGKQLEDGRT LSDYNIQKESTLHLVLRRLGG
<i>P.falciparum</i> Ub	MQIFVKTLTGKTITL DVEPSDTIENVKAKIQDKEGIPPDQQLIFAGKQLEDGRT LSDYN IQKESTLHLVLRRLGG

Use & Storage

Use:	Typical concentration to support <i>in vitro</i> conjugation is 500 µM to 1 mM depending on conditions
Storage:	Lyophilized powder at 4°C. Solubilized stock solution at -20°C. Avoid multiple freeze/thaw cycles.

Literature

References:	Ciechanover A., <i>et al.</i> (1980) <i>J. Biol. Chem.</i> 255 : 7525-7528 Coux O., <i>et al.</i> (1996) <i>Ann. Rev. Biochem.</i> 65 : 801-847 Glickman M.H. and Ciechanover A. (2002) <i>Physiol. Rev.</i> 82 :373-428 Hershko A. and Ciechanover A. (1992) <i>Ann. Rev. Biochem.</i> 61 : 761-807 Ponts N., <i>et al.</i> (2008) <i>Plos One.</i> 3(6) : e2386 Ponder E.L and Bogyo M (2004) <i>Euk. Cell.</i> 6 :1943-1952 Schwartz A.L and Ciechanover A. (1999) <i>Ann. Rev. Med.</i> 50 : 57-74. Wilkinson K.D. and Audhya T.K. (1981) <i>J. Biol. Chem.</i> 256 : 9235-9241
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