PROTEIN DATASHEET

PROTEIN NUMBER	PROTEIN NAME	EXPRESSION HOST
2016-1283	LDH-Hu (Purified recombinant *Homo sapiens* LDH)	*Escherichia coli*

GENERAL INFORMATION

Construct Design	:	LDH-Hu (2-332) was expressed with a polyhistidine-tag followed by a Human Rhinovirus 3C protease cleavage site at the N-terminus. Full length: 350 amino acids Primary sequence length: 331 amino acids (2Ala- 332Phe)
Theoretical Molecular Mass	:	38.7 kDa
Theoretical pI	:	8.16
Cell Strain	:	*Rosetta (DE3) pLysS*
Protein Description	:	The Lactate dehydrogenase protein (LDH) is critical for the conversion of lactate to pyruvate in the anaerobic glycolysis pathway to generate ATP for the malarial parasite to survive in the human host. Structural and sequence divergence between human LDH and LDH from different *Plasmodium* genera enables the use of LDH as a primary target for rapid diagnostic tests.
Application	:	A wide range of assays, such as enzymatic assay, immunoassay, and protein-protein interaction assay. Note: optimal working dilution should be determined by the user.
Restriction	:	This product is for research use only. It is not intended for use in humans.

FORMULATION AND STORAGE

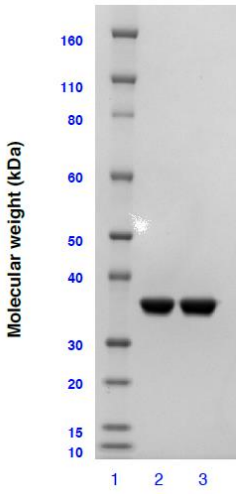
Form	:	Liquid
Purity	:	> 99 % as determined by SDS-PAGE
Protein Concentration	:	1.20 mg/mL (Lot specific)
Storage Buffer	:	Phosphate Buffer Saline + 5% Glycerol
Storage Condition	:	For longer-term storage, aliquot in small volumes and store at -80°C. Repeated freeze-thaw cycles are not recommended.
Shipping Condition	:	Shipped on dry ice. Stored at -80°C upon receipt.

COMPREHENSIVE QUALITY CONTROL

Protein Purity	:	Determined by SDS-PAGE
Protein Stability	:	Freeze-thaw stability by SDS-PAGE
		Protein unfolding and aggregation onset temperature determined by differential scanning fluorimetry

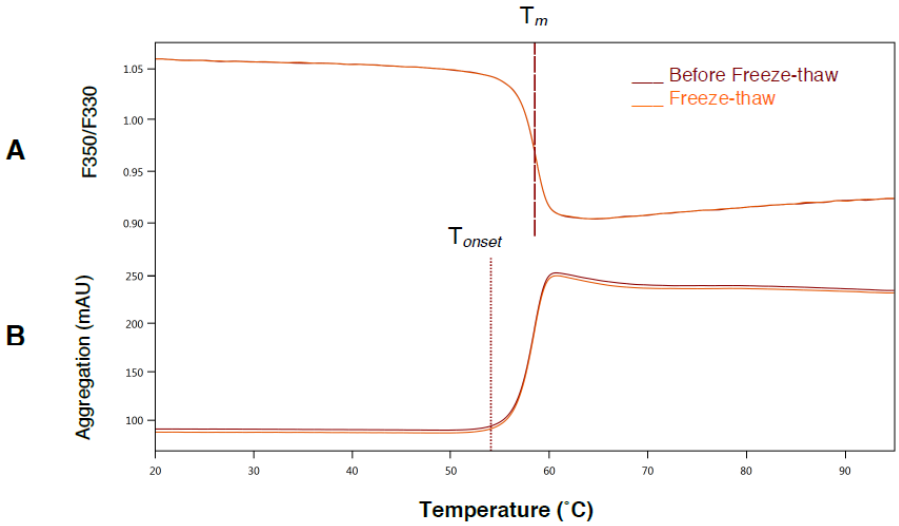
QUALITY CONTROL DATA

SDS-PAGE and Peptide Mass Fingerprinting (PMF)



- **Lane 1:** MW ladder / **Lane 2:** LDH-Hu reduced / **Lane 3:** LDH-Hu non-reduced
- The protein was determined to have a purity of 99% and was identified as LDH-Hu by PMF.

Nano Differential Scanning Fluorimetry (NanoDSF)



- NanoDSF analysis shows a thermal stability profile (A) and aggregation analysis (B) as expected for this protein.

Recipients using LDH-Hu from The Protein Expression Facility must acknowledge the facility's contribution in written publications and/or oral presentations. **The author/s acknowledge the facilities and the scientific and technical assistance of the Protein Expression Facility (PEF) at The University of Queensland.**