

## Product Data Sheet

### MARCH2 Protein, Human (Cell-Free, His, SUMO)

Cat. No.:	HY-P702365
Synonyms:	E3 ubiquitin-protein ligase MARCHF2; Membrane-associated RING finger protein 2; Membrane- associated RING-CH protein II; MARCH-II; RING finger protein 172; RING-type E3 ubiquitin transferase MARCHF2
Species:	Human
Source:	E. coli Cell-free
Accession:	Q9P0N8 (M1-V246)
Gene ID:	/
Molecular Weight:	43 kDa

PROPERTIES	
AA Sequence	MTTGDCCHLPGSLCDCSGSPAFSKVVEATGLGPPQYVAQVTSRDGRLLSTVIRALDTPSDGPFCRICHEGANGECLLSPCGCTGTLGAVHKSCLEKWLSSSNTSYCELCHTEFAVEKRPRPLTEWLKDPGPRTEKRTLCCDMVCFLFITPLAAISGWLCLRGAQDHLRLHSQLEAVGLIALTIALFTIYVLWTLVSFRYHCQLYSEWRKTNQKVRLKIREADSPEGPQHSPLAAGLLKKV
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 $\mu m$ filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add 5-50% of glycerol (final concentration). Our default final concentration of glycerol is 50%. Customers could use it as reference.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

#### DESCRIPTION

# Background MARCH2, an E3 ubiquitin-protein ligase, orchestrates diverse cellular processes by mediating the ubiquitination and subsequent endocytosis of various substrates. It is implicated in the ubiquitination and lysosomal degradation of transferrin receptor (TFRC) and CD86, suggesting a role in regulating their cellular levels. Collaborating with GOPC/CAL, MARCH2 participates in the ubiquitination and lysosomal degradation of CFTR. Additionally, it regulates the intracellular trafficking

and secretion of alpha1-antitrypsin/SERPINA1 and haptoglobin/HP by ubiquitinating and promoting the degradation of the cargo receptor ERGIC3. MARCH2 negatively modulates antiviral and antibacterial immune responses by repressing NF-kB and type 1 interferon signaling pathways through K48-linked polyubiquitination of IKBKG/NEMO. Moreover, its involvement in endosomal trafficking is indicated by its interaction with STX6. In the context of microbial infection, MARCH2 positively influences the degradation of the Vesicular stomatitis virus (VSV) G protein via the lysosomal degradation pathway, and it represses HIV-1 viral production, potentially impeding the translocation of HIV-1 env to the cell surface and reducing viral cell-cell transmission.

#### Caution: Product has not been fully validated for medical applications. For research use only.

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