

Lot # XXXXX

MATERIAL DATA SHEET

USP18, murine recombinant

Cat. # E-604

Ubiquitin-like carboxyl-terminal hydrolase 18 (USP18) is a specialized cysteine protease with a predicted molecular weight of 42 kDa. USP18 from *Mus musculus* is a member of the peptidase C19 family and shares 70% amino acid sequence identity with its human ortholog. Biologically, USP18 plays an important role in antiviral responses and interferon-mediated signaling pathways. Mice lacking the gene are hypersensitive to interferon, have shortened lifespans and pathologic abnormalities of the brain. While it was initially speculated that the cause of the defects resulted from the accumulation of ISG15-conjugated intracellular proteins (a target of USP18 catalytic function), it was later demonstrated that USP18 has multiple signaling roles, at least one of which is independent of its ISGylase activity.

This recombinant protein contains an N-terminal 6-His tag and residues Ser47-Ser368 of Accession Number Q9WTV6.

Product Information

Quantity:	50 µg
Stock:	X mg/ml (X µM) in 50 mM HEPES pH 7.5, 200 mM NaCl, 10% (v/v) Glycerol, 5 mM DTT, 1 mM EDTA
MW:	38 kDa
Purity:	≥ 98% by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie Blue Stain.

Use & Storage

Use:	Reaction conditions will need to be optimized for each specific application. We recommend an initial recombinant murine USP18 concentration of 100-250 nM when using ISG15-AMC (UL-553) as a substrate.
Storage:	Store at -80°C. Avoid multiple freeze/thaw cycles.

Literature

References:	Goldmann, T. <i>et al.</i> (2015) <i>EMBO J.</i> 34 : 1612 Ketscher, L. & Knobloch, KP (2015) <i>Cytokine</i> 76 : 569 Knobloch, K.P. <i>et al.</i> (2005) <i>Mol Cell Biol.</i> 25 : 11030 Speer, S.D. <i>et al.</i> (2016) <i>Nat Commun.</i> doi: 10.1038/ncomms11496
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840 Memorial Drive, Cambridge, MA 02139 Phone: 617-576-2210 FAX: 617-492-3565

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