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An R&D Systems Company

MATERIAL DATA SHEET

Recombinant Human His6 A20/TNFAIP3 Catalytic Domain
Cat. # E-344

A20, also known as TNF-α-induced Protein 3 (TNFAIP3) is a 790 amino acid (aa) cytoplasmic protein with a predicted molecular weight of 90 kDa. It was originally described as a protein upregulated by TNF-α stimulation (1). Human A20/TNFAIP3 exhibits 88% aa sequence identity to its mouse ortholog. Structurally, it contains seven zinc finger domains, one of which has Ubiquitin ligase (E3) activity. The N-terminus contains a deubiquitinating enzyme (DUB) domain. As such, A20/TNFAIP3 can be classified as a dual function Ubiquitin editing enzyme. It is known for its ability to modulate inflammatory immune responses by acting as a negative feedback regulator of NFκB signaling (2,3). Some putative mechanisms include its ability to modulate upstream components of the NFκB pathway such as RIP1, TRAF2, and TRAF6 (4-6). Deficiencies in A20/TNFAIP3 have been associated with lymphoid malignancies, and the development of inflammatory and autoimmune disorders (7,8).

This A20/TNFAIP3 catalytic domain includes aa residues 1-371 and an N-terminal his.

Product Information	
Quantity:	50 µg
MW:	46 kDa
Source:	*E. coli*-derived Contains an N-terminal 6-His tag Accession # NP_006281
Stock:	X mg/ml (X µM) in 50 mM MOPS pH 6.5, 150 mM NaCl, 0.5 mM EDTA, 10% Glycerol (v/v), 1 mM DTT
Purity:	>95%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain.

Use & Storage

Use: Recombinant Human His6-A20/TNFAIP3 Catalytic Domain is a Ubiquitin-specific deconjugating enzyme. Reaction conditions will need to be optimized for each specific application. We recommend an initial Recombinant Human His6-A20/TNFAIP3 Catalytic Domain concentration of 1-5 µM.

Storage: **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**

- 12 months from date of receipt, -70 °C as supplied.
- 3 months, -70 °C under sterile conditions after opening.

Literature

References:

1. Opipari, A.W. Jr. *et al.* (1992) J. Biol. Chem. **267**:12424.
2. Jaattela, M. *et al.* (1996) J. Immunol. **156**:1166.
3. Song, H.Y. *et al.* (1996) Proc. Natl. Acad. Sci. USA **93**:6721.
4. Wertz, I.E. *et al.* (2004) Nature **430**:694.
5. Boone, D.L. *et al.* (2004) Nat. Immunol. **5**:1052.
6. Shembade, N. *et al.* (2010) Science 3**27**:1135.
7. Zhang, F. *et al.* (2012) Cancer Cell Int. **12**:44.
8. Harhag, E.W. & V.M. Dixit (2012) Immunol. Rev. **246**:107.

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