

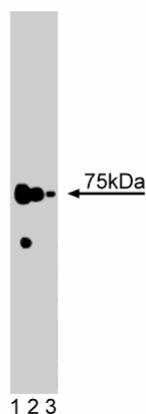
Technical Data Sheet

Purified Mouse Anti-Hsp75/TRAP1**Product Information**

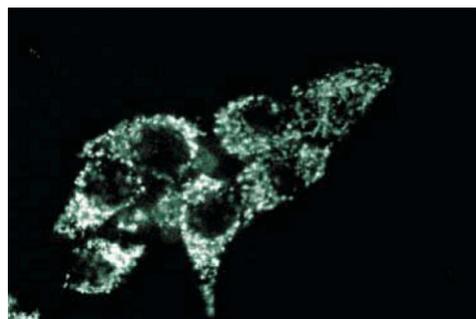
Material Number:	612344
Alternate Name:	TRAP1
Size:	50 µg
Concentration:	250 µg/ml
Clone:	42/Hsp75
Immunogen:	Human Hsp75/TRAP1 aa. 253-464
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Dog, Rat, Mouse
Target MW:	75 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

The hsp90 family of molecular chaperones is involved in a number of signal transduction pathways, including cell division, protein folding and transport. A new member of this family was recently identified as TRAP1 (Tumor necrosis factor receptor-associated protein) or hsp75. TRAP1 is a mitochondrial protein that is an ATPase and ATP-binding protein, rendering it similar to hsp90. There is a high degree of homology between TRAP1 and hsp90 in 6 domains, however one major difference is that a highly charged domain present in hsp90 is absent in TRAP1. TRAP1 has been shown to interact with the intracellular domain of the type 1 receptor for tumor necrosis factor (TNFR-1IC) and to the retinoblastoma protein (Rb). Signaling through TNFR-1 induces antiviral responses, fibroblast proliferation, cytotoxicity, etc. TRAP1 binds TNFR-1IC outside of the death domain leading to disruption in the signaling by TNFR-1. Rb has been shown to play a pivotal role in cellular differentiation and progression through the cell cycle. TRAP1 associates with Rb *via* an LxCxE motif, which is common among proteins that interact with Rb through SV40 T-antigen binding domain. Thus, TRAP1 is a new member of the hsp90 family that interacts with Rb and TNFR-1IC.



Western blot analysis of Hsp75 on HeLa lysate. Lane 1: 1:500, lane 2: 1:1000, lane 3: 1:2000 dilution of Hsp75.



Immunofluorescence staining of HeLa cells.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Store undiluted at -20°C.

Application Notes**Application**

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

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Suggested Companion Products

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal
611449	HeLa Cell Lysate	500 µg	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Chen CF, Chen Y, Dai K, Chen PL, Riley DJ, Lee WH. A new member of the hsp90 family of molecular chaperones interacts with the retinoblastoma protein during mitosis and after heat shock. *Mol Cell Biol.* 1996; 16(9):4691-4699.(Biology)

Felts SJ, Owen BA, Nguyen P, Trepel J, Donner DB, Toft DO. The hsp90-related protein TRAP1 is a mitochondrial protein with distinct functional properties. *J Biol Chem.* 2000; 275(5):3305-3312.(Biology)

Song HY, Dunbar JD, Zhang YX, Guo D, Donner DB. Identification of a protein with homology to hsp90 that binds the type 1 tumor necrosis factor receptor. *J Biol Chem.* 1995; 270(8):3574-3581.(Biology)