Datasheet for ABIN863194

anti-HSPA4 antibody

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Overview

Quantity:	100 µg
Target:	HSPA4
Reactivity:	Hamster
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This HSPA4 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Immunocytochemistry (ICC)

Product Details

Immunogen:	Synthetic peptide derived from the sequence of hamster HSP110, sequence identical to human and mouse
Specificity:	Detects ~110 kDa.
Cross-Reactivity:	Cow, Hamster, Human, Monkey, Mouse, Rat, Saccharomyces cerevisiae, Shark, Sheep
Purification:	Protein A Purified

Target Details

Target:	HSPA4
Alternative Name:	HSP110 (HSPA4 Products)
Background:	HSP110 belongs to a family of large stress proteins known as the HSP110/SSE Family. The proteins in this family are the most distantly known relatives of the well studied HSP70 family.

Target Details

	They share 30-33 % amino acid identity, mostly in the conserved ATP-binding domain (1). HSP110 cooperates with HSP70 in protein folding in the eukaryotic cytosol (2). In mammals, HSP110 is constitutively expressed, but exhibits particularly high levels in the brain. Both HSP70 and HSP110 are elevated after cerebral ischemia. Recent studies demonstrate that the protective effects of HSP110 deficiency in cerebral ischemia may partly be mediated by an increase in the chaperone activity of HSP70 (3). Studies also suggest that HSP110 can be used in heat shock protein-based cancer immunotherapy (4).
Gene ID:	10808
NCBI Accession:	NP_006635
UniProt:	Q92599

Application Details

Application Notes:	• WB (1:1000) • IHC (1:100) • optimal dilutions for assays should be determined by the user.
Comment:	1 µg/ml of ABIN863193 was sufficient for detection of HSP110 in 10 µg of human cell line mixed lysate by colorimetric immunoblot analysis using Goat anti-rabbit IgG:HRP as the secondary antibody.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1 mg/mL
Buffer:	PBS pH 7.2, 50 % glycerol, 0.09 % sodium azide, Storage buffer may change when conjugated
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	-20°C

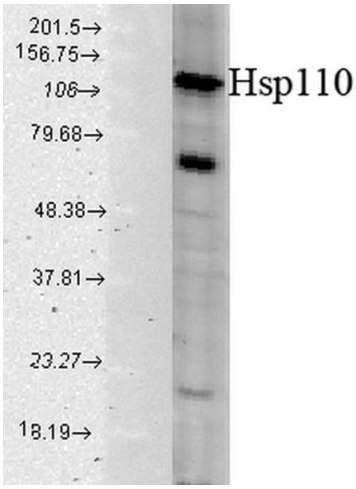
Publications

Product cited in:

Voth, Gwin, Francis, Balczon, Frank, Pittet, Wagener, Moser, Alexeyev, Housley, Audia, Piechocki, Madera, Simmons, Crawford, Stevens: "Virulent Pseudomonas aeruginosa infection converts antimicrobial amyloids into cytotoxic prions." in: **FASEB journal : official publication of the Federation of American Societies for Experimental Biology**, Vol. 34, Issue 7, pp. 9156-9179, (2020) (PubMed).

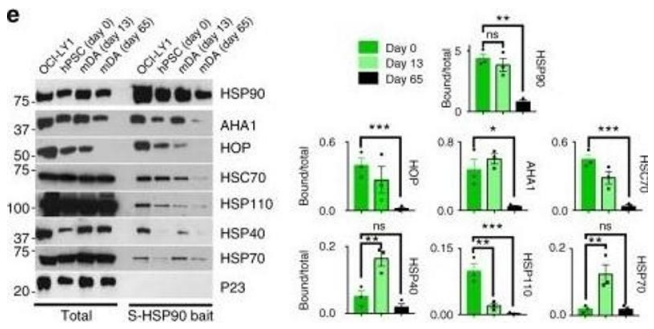
Epelbaum, Youssef, Lacor, Chaurand, Duplus, Brugg, Duyckaerts, Delatour: "Acute amnestic encephalopathy in amyloid-β oligomer-injected mice is due to their widespread diffusion in vivo." in: **Neurobiology of aging**, Vol. 36, Issue 6, pp. 2043-52, (2015) (PubMed).

Images



Western Blotting

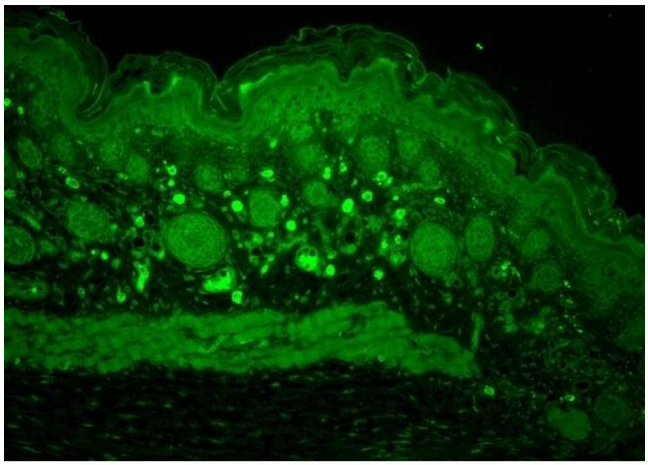
Image 1. Western blot analysis of Human Cell line lysates showing detection of HSP110 protein using Rabbit Anti-HSP110 Polyclonal Antibody (ABIN863193 and ABIN863194). Load: 15 µgprotein. Block: 1.5 % BSA for 30 minutes at RT. Primary Antibody: Rabbit Anti-HSP110 Polyclonal Antibody (ABIN863193 and ABIN863194) at 1:1000 for 2 hours at RT. Secondary Antibody: Donkey Anti-Rabbit IgG: HRP for 1 hour at RT.



Western Blotting

Image 2. HSP90 complexes in hPSCs and hPSC-derived mDA neurons. a, b Schematic illustration of the overall experimental design, showing pluripotent stem cells (PSCs) differentiation into midbrain dopaminergic (mDA) neurons (a) and the methods used to determine HSP90 incorporation into stable chaperome networks (b). c-e Native-PAGE (c), Coomassie stained denaturing gel (d) and western blots (e) comparing chaperome member levels in the whole cell lysate (Total) with those in S-HSP90 complexes (either affinity-purified, (e) or retained under native conditions (c)) in: OCI-LY1 cancer cells, hPSCs (Day

0), hPSC-derived Day 13 precursors and hPSC-derived Day 65 mDA neurons. p23, pull-down specificity control. c, e Mean±SEM, n=3 individual values from the different experiments shown as points, One-way ANOVA with Dunnett's post-hoc, ***p<0.001, **p<0.01, *p<0.05, ns p>0.05. f Viability of day 0 (hPSCs) versus day 65 mDA neurons in response to PU-H71 over 72h. Dashed line, IC50 for OCI-LY1 is shown for reference. Graph, means±SEM of data from three or four independent experimental replications. g Summary schematic, showing the disassembly of stable HSP90 networks, characterized by enhanced interaction between HSP90 and participant chaperomes, as the process of neuronal differentiation progresses from the PSC stage to the mature, day 65 DA neuron - figure provided by CiteAb. Source: PMID30341316



Immunohistochemistry

Image 3. Immunohistochemistry analysis using Rabbit Anti-HSP110 Polyclonal Antibody (ABIN863193 and ABIN863194). Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative Solution. Primary Antibody: Rabbit Anti-HSP110 Polyclonal Antibody (ABIN863193 and ABIN863194) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Rabbit (green) at 1:50 for 1 hour at RT. Localization: Positive epidermal, dermal and muscle staining.