SANTA CRUZ BIOTECHNOLOGY, INC.

# ERAB (K-20): sc-7690

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

## BACKGROUND

Amyloid-β (AB) is a neurotoxic peptide that is associated with the pathogenesis of Alzheimer's disease. AB aggregates induce cell death of neurons through the disruption of cell membranes and the generation of reactive oxygen intermediates.These neurotoxic effects are also attributed to the interaction of AB with intracellular proteins, specifically ERAB, the endoplasmic reticulum-associated amyloid β-binding protein. ERAB is characterized as a $NAD^+$-dependent dehydrogenase that is constitutively expressed in tissues and overexpressed in neurons affected in Alzheimer's disease. Cells overexpressing ERAB *in vitro* were shown to be more sensitive to AB-induced stress, and blocking the activity of ERAB inhibited this cell death, indicating that AB induced cell death is mediated by ERAB.

## REFERENCES


1. Hensley, K., et al. 1994. A model for β-amyloid aggregation and neurotoxicity based on free radical generation by the peptide: relevance to Alzheimer disease. Proc. Natl. Acad. Sci. USA 91: 3270-3274.
2. Yan, S.D., et al. 1997. An intracellular protein that binds amyloid-β peptide and mediates neurotoxicity in Alzheimer's disease. Nature 389: 689-695.
3. Price, D.L., et al. 1998. Genetic neurodegenerative diseases: the human illness and transgenic models. Science 282: 1079-1083.
4. He, X.Y., et al. 1998. A human brain L-3-hydroxyacyl-coenzyme A dehydrogenase is identical to an amyloid β-peptide-binding protein involved in Alzheimer's disease. J. Biol. Chem. 273: 10741-10746.
5. Hansis, C., et al. 1998. The gene for the Alzheimer associated β amyloid-binding protein (ERAB) is differentially expressed in the testicular Leydig cells of the azoospermic by w/w(v) mouse. Eur. J. Biochem. 258: 53-60.
6. Sambamurti, K. et al. 1998. ERAB contains a putative noncleavable signal peptide. Biochem. Biophys. Res. Commun. 249: 546-549.


## CHROMOSOMAL LOCATION

Genetic locus: HSD17B10 (human) mapping to Xp11.22; Hsd17b10 (mouse) mapping to X F3.

## SOURCE

ERAB (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ERAB of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7690 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

ERAB (K-20) is recommended for detection of ERAB of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ERAB (K-20) is also recommended for detection of ERAB in additional species, including equine, canine, bovine and porcine.

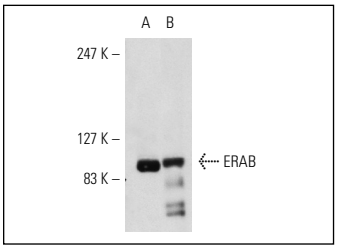
Suitable for use as control antibody for ERAB siRNA (h): sc-41938, ERAB siRNA (m): sc-41939, ERAB shRNA Plasmid (h): sc-41938-SH, ERAB shRNA Plasmid (m): sc-41939-SH, ERAB shRNA (h) Lentiviral Particles: sc-41938-V and ERAB shRNA (m) Lentiviral Particles: sc-41939-V.

Molecular Weight of ERAB homotetramer: 108 kDa.

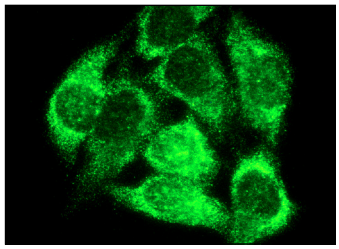
Molecular Weight of ERAB subunit size: 27 kDa.

Positive Controls: rat cerebellum extract: sc-2398, mouse brain extract: sc-2253 or SK-N-SH cell lysate: sc-2410.

## DATA




ERAB (K-20): sc-7690. Western blot analysis of ERAB expression in rat cerebellum (**A**) and mouse brain (**B**) tissue extracts.



ERAB (K-20): sc-7690. Immunofluorescence staining of methanol-fixed Jurkat cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS


1. Cosma, M.P., et al. 2003. The multiple sulfatase deficiency gene encodes an essential and limiting factor for the activity of sulfatases. Cell 113: 445-456.


## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS Satisfaction Guaranteed

Try **ERAB (23): sc-136326** or **ERAB (E-10): sc-393693**, our highly recommended monoclonal alternatives to ERAB (K-20).