

# HRF (B-3): sc-133131

## BACKGROUND

Histamine is an inflammatory mediator that is ubiquitously expressed and has a broad range of pharmacologic effects. Specifically, it plays a role in the central nervous, gastrointestinal, respiratory and immune systems. Histamine release is mediated by the stimulation of mast cells and basophils. Histamine-releasing factor (HRF) is a cytokine-like molecule that causes the release of histamine, IL-4 and IL-13 from basophils as well as the secretion of IL-8 and a calcium response in eosinophils. HRF belongs to the translationally controlled tumor protein (TCTP) family. It is expressed in several healthy and tumoral cells, including erythrocytes, hepatocytes, macrophages, platelets, keratinocytes, erythroleukemia cells, gliomas, melanomas, hepatoblastomas and lymphomas, and it is localized in the cytoplasm. HRF plays a pivotal role in allergic diseases and, due to its wide distribution in brain, is thought to be involved in neurodegenerative disorders, such as Alzheimer's disease and Down syndrome.

## CHROMOSOMAL LOCATION

Genetic locus: TPT1 (human) mapping to 13q14.13; Tpt1 (mouse) mapping to 14 D3.

## SOURCE

HRF (B-3) is a mouse monoclonal antibody raised against amino acids 1-172 representing full length HRF of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HRF (B-3) is available conjugated to agarose (sc-133131 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-133131 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-133131 PE), fluorescein (sc-133131 FITC), Alexa Fluor<sup>®</sup> 488 (sc-133131 AF488), Alexa Fluor<sup>®</sup> 546 (sc-133131 AF546), Alexa Fluor<sup>®</sup> 594 (sc-133131 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-133131 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-133131 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-133131 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

HRF (B-3) is recommended for detection of HRF of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with FKSG2. HRF (B-3) is also recommended for detection of HRF in additional species, including canine and porcine.

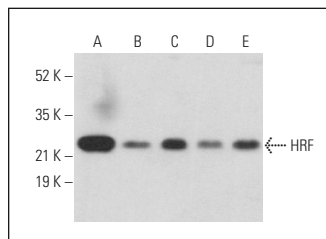
Suitable for use as control antibody for HRF siRNA (h): sc-40675, HRF siRNA (m): sc-40676, HRF shRNA Plasmid (h): sc-40675-SH, HRF shRNA Plasmid (m): sc-40676-SH, HRF shRNA (h) Lentiviral Particles: sc-40675-V and HRF shRNA (m) Lentiviral Particles: sc-40676-V.

Molecular Weight of HRF: 23 kDa.

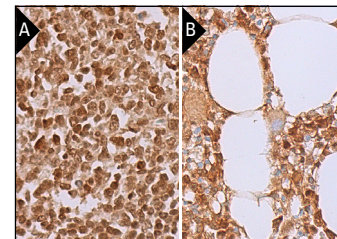
## STORAGE

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

## DATA



HRF (B-3): sc-133131. Western blot analysis of HRF expression in NIH/3T3 (A), DU 145 (B), CCRF-CEM (C), HeLa (D) and THP-1 (E) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



HRF (B-3): sc-133131. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing nuclear staining of cells in germinal center and cells in non-germinal center (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing nuclear and cytoplasmic staining of hematopoietic cells (B).

## SELECT PRODUCT CITATIONS

- Lin, Q., et al. 2014. iTRAQ analysis of colorectal cancer cell lines suggests Drebrin (DBN1) is overexpressed during liver metastasis. *Proteomics* 14: 1434-1443.
- Jin, H., et al. 2015. RNA interference-mediated knockdown of translationally controlled tumor protein induces apoptosis, and inhibits growth and invasion in glioma cells. *Mol. Med. Rep.* 12: 6617-6625.
- Roque, C.G., et al. 2016. Tumor protein Tctp regulates axon development in the embryonic visual system. *Development* 143: 1134-1148.
- You, C., et al. 2016. Comparative proteomics analysis of global cellular stress responses to hydroxyurea-induced DNA damage in HeLa cells. *Cytotechnology* 68: 809-820.
- Shin, S.B., et al. 2017. Comparative analysis of a FRET-based PLK1 kinase assay to identify PLK1 inhibitors for chemotherapy. *Anticancer Res.* 37: 1177-1183.
- Huang, M., et al. 2018. Translationally controlled tumor protein affects colorectal cancer metastasis through the high mobility group box 1-dependent pathway. *Int. J. Oncol.* 53: 1481-1492.
- Gouveia Roque, C., et al. 2018. Growth cone Tctp is dynamically regulated by guidance cues. *Front. Mol. Neurosci.* 11: 399.
- Gao, J., et al. 2020. Combination of dihydroartemisinin and resveratrol effectively inhibits cancer cell migration via regulation of the DLC1/TCTP/Cdc42 pathway. *Food Funct.* 11: 9573-9584.

## RESEARCH USE

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

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