SANTA CRUZ BIOTECHNOLOGY, INC.

Histamine H1 Receptor (G-11): sc-374621

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. The effects of histamine are mediated by a family of G protein-coupled receptors, the Histamine H1, H2, H3 and H4 Receptors. The gene encoding the human Histamine H1 Receptor maps to chromosome 3p25 and is expressed in highest abundance in placenta, with lower levels in lung, skeletal muscle, kidney and brain. The murine Histamine H2 Receptor gene maps to chromosome 13 and is highly expressed in stomach with moderate expression in brain and heart. The gene encoding the human Histamine H3 Receptor is located on chromosome 20 and is expressed as six alternative splice variants in thalamus. The human Histamine H4 Receptor gene maps to chromosome 18q11 and is expressed most abundantly in bone marrow and spleen in addition to peripheral blood leukocytes, thymus, small intestine and colon. The histamine receptors respond to several agonists and antagonists, which make them potential therapeutic targets for several diseases, such as asthma, epilepsy and cardiac ischemia.

CHROMOSOMAL LOCATION

Genetic locus: HRH1 (human) mapping to 3p25.3.

SOURCE

Histamine H1 Receptor (G-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 303-341 within a cytoplasmic domain of Histamine H1 Receptor of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Histamine H1 Receptor (G-11) is available conjugated to agarose (sc-374621 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374621 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374621 PE), fluorescein (sc-374621 FITC), Alexa Fluor® 488 (sc-374621 AF488), Alexa Fluor® 546 (sc-374621 AF546), Alexa Fluor® 594 (sc-374621 AF594) or Alexa Fluor® 647 (sc-374621 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374621 AF680) or Alexa Fluor® 790 (sc-374621 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374621 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

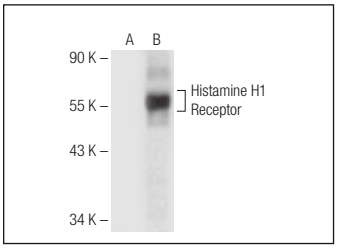
Histamine H1 Receptor (G-11) is recommended for detection of Histamine H1 Receptor of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Histamine H1 Receptor siRNA (h): sc-35563, Histamine H1 Receptor shRNA Plasmid (h): sc-35563-SH and Histamine H1 Receptor shRNA (h) Lentiviral Particles: sc-35563-V.

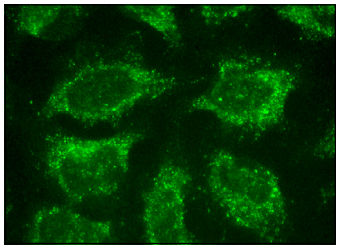
Molecular Weight of Histamine H1 Receptor: 56 kDa.

Positive Controls: JAR cell lysate: sc-2276 or human Histamine H1 Receptor transfected HEK293T whole cell lysate.

DATA



Histamine H1 Receptor (G-11): sc-374621. Western blot analysis of Histamine H1 Receptor expression in non-transfected (**A**) and human Histamine H1 Receptor transfected (**B**) HEK293T whole cell lysates.



Histamine H1 Receptor (G-11): sc-374621. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Aceto, G., et al. 2022. Activation of histamine type 2 receptors enhances intrinsic excitability of medium spiny neurons in the nucleus accumbens. J. Physiol. 600: 2225-2243.
2. Gao, Y., et al. 2022. TRPV1 SUMOylation suppresses itch by inhibiting TRPV1 interaction with H1 receptors. Cell Rep. 39: 110972.
3. Ding, Y.F., et al. 2022. Combined impacts of histamine receptor H1 gene polymorphisms and an environmental carcinogen on the susceptibility to and progression of oral squamous cell carcinoma. Aging 14: 4500-4512.
4. Pfanzagl, B., et al. 2022. Histamine via Histamine H1 Receptor enhances the muscarinic receptor-induced calcium response to acetylcholine in an enterochromaffin cell model. Clin. Exp. Pharmacol. Physiol. 49: 1059-1071.
5. Li, B., et al. 2023. Histamine signaling in the bed nucleus of the stria terminalis modulates stress-induced anxiety. J. Affect. Disord. 335: 195-203.

RESEARCH USE

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