Human Airway Trypsin-like Protease/HAT Antibody

Monoclonal Mouse IgG_1 Clone # 337029

Catalog Number: MAB2695

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Airway Trypsin-like Protease/HAT in direct ELISAs and Western blots. Recognizes the catalytic-domain of recombinant human HAT.
Source	Monoclonal Mouse IgG_1 Clone # 337029
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Airway Trypsin-like Protease/HAT Ala42-Ile418 Accession # O60235
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant Human Airway Trypsin-like Protease/HAT (Catalog # 2695-SE)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Human Airway Trypsin-like protease (HAT), also known as Transmembrane Protease, Serine 11D (TMPRSSIID), is a type II transmembrane serine protease that is expressed in the cells of the submucosal serous glands of the bronchi and trachea (1-3). The deduced sequence predicts a short cytoplasmic tail (aa 120), a transmembrane domain (aa 21-41), and an ectodomain consisting of a SEA domain (aa 44-164) and a catalytic domain (aa 187-418). The single-chain precursor can be converted into a disulfide-linked two-chains, one of which corresponds to the catalytic domain. HAT was initially purified from the sputum of patients with chronic airway diseases (1). HAT has been shown to induce PAR-2 mediated IL-8 release in psoriasis vulgaris and increase mucin expression in airway epithelial cells (4, 5). The amino acid sequence of human HAT is 99%, 79%, and 67% identical to that of chimpanzee, canine and rat/mouse.

References:

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2. Yamaoka, K. *et al.* (1998) J. Biol. Chem. **273**:11895.
3. Hooper, J.D. *et al.* (2001) J. Biol. Chem. **276**:857.
4. Iwakiri, K. *et al.* (2004) J. Invest. Dermatol. **122**:937.
5. Chokki, M. *et al.* (2004) Am. J. Respir. Cell Mol. Biol. **30**:470.

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