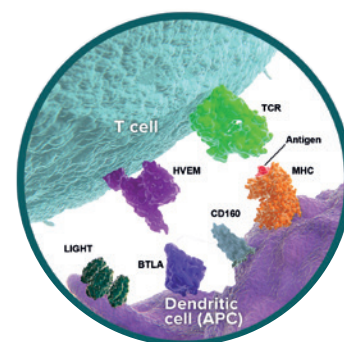


HVEM – BTLA – LIGHT – CD160 Axis

The herpesvirus entry mediator (HVEM; CD270; TNFRSF14) represents a central hub in immune regulation, orchestrating complex interactions with multiple partners, including BTLA, LIGHT and CD160. HVEM is a molecular switch that acts both as an immune system stimulator and as an inhibitor. It is expressed in T cells, B cells, natural killer cells, dendritic cells and endothelial cells. LIGHT is an immune stimulator that contributes to dendritic cell maturation and T cell expansion. The immune suppressor BTLA functions in opposition to LIGHT by inhibiting naïve T cell expansion and induction of Treg cells. CD160 acts as an immune suppressor through its interactions with HVEM. The checkpoint receptors/ligands system HVEM, LIGHT, CD160 and BTLA (CD272) is part of a complex network of overlapping receptor interactions that function in both immune stimulation and suppression and which is a potential therapeutic target for treatment of autoimmune diseases and allergies and controlling antitumor responses.



SELECTED REVIEWS: HVEM, a cosignaling molecular switch, and its interactions with BTLA, CD160 and LIGHT: J.I. Rodriguez-Barbosa, et al.; Cell. Mol. Immunol. **16**, 679 (2019) • Redesigning HVEM Interface for Selective Binding to LIGHT, BTLA, and CD160: R. Shrestha, et al.; Structure **28**, 1197 (2020) • Beyond the anti-PD-1/PD-L1 era: promising role of the BTLA/HVEM axis as a future target for cancer immunotherapy: C. Sordo-Bahamonde, et al.; Mol. Cancer **22**, 142 (2023) • Targeting B and T lymphocyte attenuator in cancer immunotherapy: K. Mortezaee; Int. J. Biol. Macromol. **318**, 144953 (2025)

Related Recombinant Proteins and Antibodies

PROTEINS	PID	SIZE	SOURCE	ENDOTOXIN	SPECIES
BTLA (human):Fc (human) (rec.)	CHI-HF-210CD272	100 µg	CHO cells	<0.06EU/µg	Hu
BTLA (human):Fc (mouse) (rec.)	CHI-HF-211CD272	100 µg	CHO cells	<0.06EU/µg	Hu
BTLA [CD272] (human)-mulg Fusion Protein	ANC-542-020	25 µg	CHO cells	n.d.	Hu
CD160 (human):Fc (human) (rec.)	CHI-HF-210CD160	100 µg	CHO cells	<0.06EU/µg	Hu
LIGHT, Soluble (human) (rec.)	AG-40B-0009	10 µg 3 x 10 µg	CHO cells	<0.01EU/µg	Hu, Ms
HVEM (human)-mulg Fusion Protein	ANC-531-020	25 µg	CHO cells	n.d.	Hu
ANTIBODIES	PID	SIZE	ISOTYPE	APPLICATION	SPECIES
anti-BTLA (human), mAb (6F4)	AG-20B-0049	100 µg	Rat IgG1	FACS, FUNC	Hu
anti-BTLA (human), mAb (ANC6E9)	ANC-272-020	100 µg	Mouse IgG1κ	FACS, FUNC	Hu
anti-BTLA (human), mAb (ANC5A5)	ANC-372-020	100 µg	Mouse IgG1κ	FACS	Hu
anti-HVEM (human), mAb (ANC3B7)	ANC-270-020	100 µg	Mouse IgG2ak	FACS	Hu