Recombinant Mouse IL-19 (His, Flag)

Information

Gene ID	329244
Accession #	Q8CJ70
Alternate Names	IL-10C; IL19; IL-19; interleukin 19; MDA1; melanoma differentiation associated protein-like protein
Source	HEK293
Protein sequence	LRRCLISVDMRLIEKSFHEIKRAMQTKDTFKNVTILSLENLRSIKPGDVCCMTNNLLTFYRDRVFQDHQERSL EVLRRISSIANSFLCVQKSLERCQVHRQCNCSQEATNATRIIHDNYNQLEVSSAALKSLGELNILLAWIDRNH LETPAA
Tag	C-His, C-Flag
M.Wt	The protein has a calculated MW of 21.82 kDa.
Appearance	Solution protein
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 36 months from date of receipt, -20 to -70°C as supplied
Concentration	1 mg/mL
Formulation	Supplied as a 0.2 μm filtered solution in PBS, pH7.4.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. This solution can be diluted into other aqueous buffers.
Biological Activity	Fully biologically active as determined by a cell proliferation assay using BaF3 mouse pro-B cells transfected with human IL-20 Rα and human IL-20 Rβ cells. The EC50 for this effect is 4.8 ng/mL.
Shipping Condition	Shipping with dry ice.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Quality Control

Purity	> 95 % by SDS-PAGE.
Endotoxin	Less than 1.0 EU/μg as determined by LAL method.

Description

Interleukin 19 (IL-19) is a member of the IL-10 family of cytokines [1]. The IL-10 family is a class II alpha -helical collection of cytokines that contains two groups, a viral homolog and a cellular homolog group. Within the cellular homolog group, there are two additional groupings, one which uses IL-10 R2 as a signal transducing receptor (IL-10, IL-22 and IL-26), and one which uses IL-20 R2 as a signal transducing receptor (IL-19, IL-20 and IL-24) [2 - 4]. Mouse IL-19 is synthesized as a 176 amino acid (aa) precursor that contains a 24 aa signal sequence and a 152 aa mature region [5]. Based on human studies, it is expected to be secreted as a glycosylated monomer, 35 - 45 kDa in size [2, 6, 7]. IL-19 is unusual in that it contains seven amphipathic helices [2, 4, 8]. Mature mouse IL-19 shares 69% aa sequence identity with the mature human IL-19, and 85% and 68% aa identity to unpublished Genbank sequences for rat and canine IL-19, respectively. Although mouse IL-19 is active on human cells, human IL-19 is not active on mouse cells [5]. IL-19 expression is limited to activated keratinocytes and monocytes, with a possible contribution from B cells [6, 9, 10]. IL-19 binds a receptor complex

consisting of the IL-20 receptor alpha (also known as IL-20 R1) and the IL-20 receptor beta (IL-20 R2) [3, 4, 11, 12]. This receptor complex is also shared by IL-20 and IL-24. Notably, IL-19 is reported to actually bind to IL-20 R2, which is generally considered to be only the signal transducing receptor subunit [7, 13]. Functionally, it has been reported that IL-19 both will and will not induce IL-6 and TNF production by monocytes [5, 14]. It does, however, seem to drive T-helper cell differentiation towards a Th2 response, inducing both IL-10 and production of itself [5, 14].

Reference

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